



## THE HAWNE COLLIERIES COMPANY

(LIMITED),

Capital £200,000, in 25 shares.

Payments—£2 on application, and £3 on allotment.

The liability of shareholders is limited to the amount of their shares.

If no allotment is made the deposit will be returned in full.

## COURT OF DIRECTORS.

J. C. DAVIS, Esq., 69, Leadenhall-street, E.C.

T. C. JARVIS, Esq., 5, Pump-court, Temple, E.C.

H. W. JOHNSON, Esq., Brixton House, Camden-road, N.

THOMAS NICHOLSON, Esq., 27, Change-alley, Sheffield.

GEORGE NEVILLE, Esq., Coal Exchange, London.

EDWARD DUNKLEY REYNOLDS, Esq., Temple Cloud, near Bristol.

W. WIGGINTON, Esq., 3, Newman's-court, Cornhill, E.C., and Eton Lodge, Hampton Hill, S.W.

J. D. PHILLIPS, Esq., Managing Director, Attercliffe House, Holly Hall, Dudley.

BANKERS.—Messrs. BARCLAY, BEVAN, TRITTON, TWELLS, and CO., London.

SOLICITOR.—B. F. FRENCH, Esq., 34, Lime-street, London, E.C.

SECRETARY.—W. C. JACKSON, Esq., OFFICES—9, BUCKLERSBURY, LONDON, E.C.

AUDITOR.—F. G. PRIDEAUX, Esq. (Messrs. Grey, Prideaux, and Booker), 46, Lincoln's Inn-fields, W.C.

Application for shares to be made to Messrs. C. S. WEST and CO., 23, 24, and 25, Exchange, Southwark-street, London, S.E., and 163, Fenchurch-street, London, E.C.

This company has been formed for the purpose of purchasing and working part of the valuable property known as the "Hawne" estate, situate near Dudley, and in the heart of the best of the Midland Coal District.

This property consists of a very valuable freehold estate of 170 acres, on which stands a mansion, together with substantial farmhouses, as well as a large quantity of excellent timber.

The estate is surrounded by good roads, and roads intersect it, giving a large amount of frontages.

MINES, &amp;c.—The mines and minerals consist of 208 acres—48 of which are leased, for coal only, to a large and well-known firm, leaving 160 acres of coal for the company's works. The 48 acres thus leased will revert to this company upon the expiration of the term.

The total may thus be subdivided:—

180 acres brooch.  
90 acres thick (10 yard) coal.  
70 acres ribs and pillars.  
180 acres new mine coal.  
208 acres gubbin and other ironstone seams.

170 acres fire-clay, supposed to be over the whole, with excellent brick-earth for red, and other bricks.

170 acres of surface, with mansion, farm-houses, &amp;c., the whole well timbered.

SHAFTS.—On the 70 acres of partially-gotten mines there are two shafts to the thick coal, 25 yards from the surface, which can be repaired and made ready for work in a short time. The cost of this, and new first-class machinery, will be about £2000.

It is calculated that a second pair of shafts, caged, and fitted with the best machinery, can be sunk to the 90 acres of Thick coal, and completed, for the sum of £13,000.

With these two pair of pits the whole property can be well worked.

PUMPING.—It is believed that no pumping-engine will be required, and this will save a large outlay, and add to the security of the works.

FARMS, &amp;c.—The whole of the surface is farmed at an inadequate rental of £50 per annum, and as but little will be required for spoil bank, &amp;c., this area would not be materially interfered with; as, however, the present proprietor was about to raise the rent to £750, the company calculate upon this advance, after due notice.

OFFICES, &amp;c.—The large residence will afford adequate accommodation for the managing director, offices for the works, stabling for the horses, and out-buildings for other purposes.

The possession of Hawne House is, therefore, of great value to the estate, as but little outlay will be needed to make it all that is desirable, and thus save costly erections.

FREEHOLD.—The most important feature in this estate is that of its being freehold, as it is a matter of great difficulty to get property suitable for mining operations which is not interfered with by several, and in many cases antagonistic, interests. This circumstance has caused the property to be much sought after, and had there been a willingness to subdivide it, it would long since have changed hands.

The property being freehold, the company will be able to deal with the surface in any way they may find most conducive to the interest of the shareholders, and when the mines are worked out the great frontages will then be applicable for building purposes, for which they will be extremely valuable.

ROTALY.—Another great advantage attending the securing the freehold, will be the entire independence of the company from all those heavy rates which are levied upon neighbouring collieries in the shape of royalty dues. Neither for coal, iron-stone, or fire-clay, will there be any outgoing for this purpose, and this, in itself, will be a source of large profit, seeing that so small a royalty as £1. per ton would amount to fully as much as the whole capital of the company.

Taking this royalty as above, the saving upon coal alone would justify the outlay that is necessary to secure and work the estate. In addition to this there will be no royalty upon ironstone and fire-clay.

COAL.—The whole of the coal upon the estate has been well proved, and its quality is of the best description, and equal to any found in the locality. The Brooch is 2 feet 6 in. to 3 feet thick, with a 19 yard seam beneath, and other seams below that. The New Mine coal, at a greater depth, is admirably adapted for ironworks, &amp;c.

THE TEN YARD SEAM COAL.—The great value of this Thick coal for the purpose of the manufacture of iron cannot be over-estimated; and it has been stated at a recent important meeting of mining engineers that the 18s. of Thick coal from such colossal fortunes have been made while being rapidly exhausted.

The 50 acres of Thick coal in the Hawne estate have not yet been worked.

It would be difficult to find in Staffordshire an equal area of unworked Thick coal which could be purchased, the great bulk of that ungotton belonging to the Earl of Dudley.

IRONSTONE, &amp;c.—The ironstone in this estate forms valuable seams of the very best description, lies in large quantities, and is easily worked.

FIRE-CLAY.—The advantage of having this most useful (and, in the great majority of cases, unusual) material cannot be too highly rated, it being, besides, in the heart of the best fire-clay district in the kingdom. It found in adjoining properties, its value per acre is equal to that of coal in many of the Midland collieries; and as the surface is for use at the discretion of the company, the material can be immediately utilised, and a large profit secured at a mere nominal outlay.

In addition to the fire-clay there is excellent earth for the manufacture of pressed and other building bricks, both white and red, and a market can be found for all that can be made.

The advantage of having bricks upon the estate, for furnaces, ovens, shafts, &amp;c., will be a source of saving to the company, besides securing a good and highly remunerative profit upon those sold.

QUALITY.—The whole of the coals, ironstone, and fire-clay are second to none in the neighbourhood, either for quality or the quantity that the estate will yield.

PRICE OF COAL.—The sums realised during the month of August, 1873, for coal at the pit's mouth, as proved by receipts from neighbouring collieries, are as follows:—

—Coal, 20s. per ton; lumps, 15s.; slack, 10s.; and there is no probability of these prices being reduced. The proportion from maiden mines is 2 coal, 2 lumps, and 1 slack, or 16s. per ton.

ACCESS.—Highway and other roads surround the estate, and good roads intersect it. These roads lead to three important towns, and a large number of villages, and iron and other works. There is also a canal basin upon the estate, which affords ready access to nearly every part of the country.

RAILWAYS.—There are two lines of railway now in course of construction, which will run through the estate, and sidings can be readily made in suitable parts. Notice has been given by the railway for 7 acres to be taken for this purpose, the arrangements for compensation for which will have to be made by the company, and without sacrificing the interests of the company, or pressing hardly upon the railway, a sufficient and satisfactory amount will be secured and placed to their credit.

The advantages according to the estate by the formation of these railways can hardly be estimated.

The only agreement entered into is dated the 24th day of October, 1873, between William Wigginton, of the one part, and William Charles Jackson, on behalf of the company, of the other part, for the purchase of the property as stated above. Copies of this agreement, and of the Articles of Association, and engineer's report can be seen at the offices of the company, and of the solicitor.

Estimated profit and loss account for one year's trading when the operations of the company are developed.

## DEBTOR.

200,000 tons of coal, maximum outlay for annual output at 5s. £60,000 0 0

(The cost of getting does not exceed 4s. per ton.)

20,000 tons of ironstone ditto, at 10s. 10,000 0 0

CREDITOR. £70,000 0 0

(Present prices are as stated above.)

20,000 tons of ironstone ditto, selling price 25s. 25,000 0 0

Farm rental 530 0 0

£180,530 0 0

Deduct cost of production 70,000 0 0

Balance over cost of production £90,530 0 0

Exclusive of any profit on fire-clay, which must be very considerable.

## THE HAWNE COLLIERIES COMPANY (LIMITED).

## ABSOLUTE SECURITY. FREEHOLD ESTATE.

In drawing attention to this property, we can undoubtedly say that no safer investment was ever offered to the public, inasmuch as the estate to become the property of this company is freehold.

Freehold surface, on which there is a large mansion, also farm-houses, buildings, &amp;c.

## FREEHOLD MINERALS.

The prospectus contains a very low estimate of the value of this estate, and we have the greatest confidence in directing the special attention of investors thereto.

The annual revenue of profits shown must be taken as very much under the actual facts, for the prices now obtainable at the pit's mouth for coal exceed 20s. per ton, whereas the estimate is taken at 12s. 6d.

The property being freehold, the company will have no royalty to pay.

In most properties offered for subscription the holding is leasehold, so that unless a redemption fund is provided for, the whole matter goes on the expiration of the

lease, but the Hawne estate is freehold, and when the enormous reserves of coal, iron, and fire-clay known to exist through the whole estate are worked out (should this ever be the case), the shareholders will still have a most valuable estate, in a splendid locality, which can be let on building leases, and bring them in a perpetual revenue.

The royalty on the output of mineral, if leasehold, would be very great indeed—sufficient of itself alone to warrant the purchase of the estate.

We have been induced, in consequence of the importance of this property, to say more than usual on the application forms, but the unprecedented nature of the investment has led us to do so—the value of the property is beyond all doubt.

The shares must rapidly rise to a high premium; we, therefore, advise a very early application.

We again draw attention to the fact that the whole estate is freehold.

## THE SURFACE AND MINERALS BECOME THE ABSOLUTE PROPERTY OF THE SHAREHOLDERS.

The royalty, supposing the company to let the mineral on lease, would of itself make a handsome dividend; but as it proposed to work the coal, iron, and fire-clay for the benefit of the shareholders, the royalty in this case will be so much immediate gain.

All dividends will be paid quarterly. We do not say what amount will be paid in dividend—the profit and loss statement must speak for itself—suffice it to remark, they will exceed the most sanguine expectations.

## FORM OF APPLICATION FOR ALLOTMENT OF SHARES.

Payment to be made as follows:—£2 on application; £3 on allotment.

## ISSUE OF SHARES AT PAR.

To Messrs. C. S. WEST and CO., 23, 24, and 25, Exchange, Southwark-street, London, S.E., and 163, Fenchurch-street, E.C.

GENTLEMEN.—I hereby remit the sum of £\_\_\_\_, and request that you will procure for me shares in the Hawne Colliery Company (Limited), and I hereby agree to accept such shares, or any less number that may be procured; and I authorise you to forward by post, to my address, the certificate thereof.

Name in full \_\_\_\_\_

Firm (if any) \_\_\_\_\_

Profession or occupation \_\_\_\_\_

Place of business \_\_\_\_\_

Residence \_\_\_\_\_

Applications for shares will be taken in the order they are received. No guarantee is given that the full number applied for will be granted. If no allotment deposit will be returned without any deduction.

MESSRS. HOLDERNESS, NOTT, and CO., INVITE SUBSCRIPTIONS FOR 10,000 SHARES OF £5 EACH IN THE

## WERNPISTILL COLLIERY COMPANY (LIMITED).

Incorporated with limited liability under the Companies Acts, 1862 and 1867, limiting the liability of shareholders to the amount of their shares.

Capital £100,000, in 20,000 shares of £5 each.

First Issue £50,000, in 10,000 shares of £5 each. Payment—£1 on application;

£2 on allotment.

The remainder of the capital will only be called if required, and no call will exceed 20s. per share, nor be made at intervals of less than three months.

If no allotment is made, the deposit will be returned in full.

## DIRECTORS.

C. H. WARING, Esq., M.Inst.C.E., Pall Mall Club; the Darren, Neath, Director of the Bath Colliery Company.

The Hon. O. G. LAMBERT, 7, Albemarle-street, W.

JOHN H. EVENS, Esq., 9, Finsbury-place South, E.C.

H. STEPHENSON, Esq., Newman's-court, Cornhill.

BANKERS.—THE CENTRAL BANK OF LONDON, 52, Cornhill, and its Branches.

BROKERS.—MESSRS. HOLDERNESS, NOTT, and CO., St. Michael's House, Cornhill.

SOLICITOR.—GEORGE S. WARMING, Esq., 1, Gresham-buildings, Basinghall-street, E.C.

AUDITOR.—GEORGE S. WARMING, Esq., 1, Gresham-buildings, Basinghall-street, E.C.

TEMPORARY OFFICES.—MESSRS. G. M. BRIGHT and CO., 20, Gresham-buildings, Basinghall-street, E.C.

SECRETARY.—C. B. CAMPBELL, Esq., 20, Gresham-buildings, Basinghall-street, E.C.

ST. MICHAEL'S HOUSE, CORNHILL, E.C.

## PROSPECTUS.

## ESTATE 700 ACRES.

This company is formed for the purpose of acquiring, working, and fully developing the valuable coal and other mineral properties situated at Briton Ferry, Glamorgan, South Wales, consisting of about 700 acres of very superior coal, together with a large quantity of fire-clay, and some ironstone.

## A GOING CONCERN.

This colliery has been in profitable working for some years, and on the property are all the appliances for getting coal, including tramways, wagons, machinery, horses, &amp;c.; also mills, engines, kilns, buildings and sheds for the manufacture of fire-bricks.

## LEASE SIXTY YEARS.

The estate is held under a lease granted by the Earl of Jersey, for 60 years from the 3rd of December, 1853, at the very moderate royalties of 4d. per ton on coal, 6d. per ton on ironstone, and 4d. per ton on fire-clay.

The favourable features of this colliery are the following:—

1.—It is sold as a going concern.

2.—The absence of water, thus saving the great expense of pumping machinery.

3.—The colliery is and will be worked by adit levels, no shafts will have to be sunk for winning the coal.

4.—The situation is most favourable, as it stands on the side of the Great Western Railway, with which it has direct communication. The present openings are within a few yards of Briton Ferry Docks, enabling coal to be shipped to all parts of the world at a minimum price for transport.

## SEAMS OF COALS.

There are four valuable seams of coal on this property, estimated to yield a daily output of 300 tons, which assuming only 2s. per ton profit (the present profit being 4s. for 280 working days per annum), shows a total return to the company of £27,000 per annum; but on the improvements recommended by Messrs. Shiford and Robinson being carried into effect the output will be increased to 400 tons daily, which, at the same profit of 2s. per ton, shows an annual net profit of £10,400 a year, exclusive of the profit on fire-bricks and ironstone.

Messrs. Shiford and Robinson report as to one portion of the property, that "the whole of the surface to the east of the Pantycelyn fault is unworked." The area of this part of the property we estimate at about 400 acres, of which about one-half is to the rise of the water level, and one-half to the dip. The amount of coal under this we estimate to be at least 4,000,000 tons, after making a liberal deduction for pillars, bars, and scrap coal, &amp;c. This would, therefore, furnish an output of 400 tons a day for the remainder of the time, and it is on this portion of the property that we advise capital being expended."

## BRICKWORKS IN FULL OPERATION.

In addition to the coal produce of the colliery, there is an almost unlimited quantity of first-class clay for the manufacture of fire-bricks, a most advantageous feature in this colliery, all the sand and coal being utilised for making bricks. A stratum of clay underlies each seam of coal. Extensive brickworks and machinery are in full operation now, producing 24,000 bricks per week, which, by the erection of an extra kiln, can be increased to 30,000 per week. The bricks are of excellent quality, and command a ready sale at 6d. per 1000, leaving a clear profit of 3d.

THE SUBSCRIPTION LIST WILL CLOSE ON SATURDAY, the 13th Inst., for LONDON and the COUNTRY.

**THE MUNICIPAL TRUST.**  
(ESTABLISHED FOR THE PURPOSE OF INVESTMENTS IN BONDS OF MUNICIPALITIES WITHIN THE UNITED STATES OF AMERICA.)

Capital One Million Sterling.

In A Certificates of £50 and £100 each, with coupons attached, bearing interest at the rate of 6*7* per cent. per annum, payable quarterly.

First coupon payable May 1st, 1873.

To each A Certificate will be attached a B Certificate for one-half the amount (say of the value of £25 and £50), entitling the holder to payment of both certificates at par on drawing of the A Certificate.

The Certificates will be issued to Bearer.

Payments for each £100 A Certificate:—

£5	On application.
£10	On allotment.
£25	On 20th day of January, 1874.
£50	On 20th day of February, 1874.
£50	On 20th March, 1874.

The payments required for each £50 Certificate will be one-half of each of the above amounts.

One-third of the original amount of capital will be redeemed, by drawings, at par, out of the surplus interest and profits. With each A Certificate the corresponding B Certificate will be redeemed; when one-third of the A and B Certificates shall have been paid off, the securities representing the amount of the original capital will be realised and applied to the immediate redemption of the remaining A and B Certificates, and the Trust finally closed.

By this arrangement all the certificate holders will in like manner participate in the advantages of the Trust—i.e., they will receive, besides 7 per cent. interest per annum, a bonus (as represented by the B Certificates) of 50 per cent. on the invested capital.

The constitution of this Trust will provide for the investment of not more than 5 per cent. of the capital in any one security.

In the constitution of the Trust special care has been directed to the attainment of the two following objects:—First, to divide the investment among many carefully-selected securities; and, secondly, to ensure to the subscribers an equal share of the profits that will be made at the earliest possible date.

Two-thirds of the amount of the above capital has been guaranteed in Municipal Bonds.

TRUSTEES.

HON. CHARLES W. WENTWORTH FITZWILLIAM, M.P.

for Malton.

SIR SILLS JOHN GIBBONS, Bart., Alderman of London.

ANDREW JOHNSTON, Esq., M.P. for South Essex.

RICHARD B. MARTIN, Esq., Banker, Lombard-street.

JOHN G. TALBOT, Esq., M.P. for West Kent.

CERTIFICATE HOLDERS' COMMITTEE.

CHAIRMAN—CHARLES E. LEWIS, Esq., M.P., 8, Old Jewry.

DEPUTY-CHAIRMAN—HENRY CECIL RAIKES, Esq., M.P., 95, Onslow-square.

SIR HARRY HOLYOAKE GOODRICKE, Bart., The Mythe, Tewkesbury.

JOHN COOKE HESTER, Esq., 1, Great Tower-street.

ADMIRAL W. W. HORNBY, Cromwell-road, S.W., and Knowsley, Prescot.

JOHN H. EVANS, Esq., 5, Fitzroy-square, Regent's Park.

WALTER JAMES LORD, Esq., Union-court, Old Broad-street.

EDWARD ROSS, Esq., 1, Jeffrey's-square, St Mary Axe.

GRANVILLE R. RYDER, Esq., Managing Director of the Lands Improvement Company.

CORRESPONDENTS IN NEW YORK.

Messrs. W. N. COLE and Co., 17, Nassau-street.

BANKERS.

LONDON—Messrs. MARTIN and Co., 68, Lombard-street.

LIVERPOOL—THE LIVERPOOL COMMERCIAL BANKING COMPANY (LIMITED).

MANCHESTER—Messrs. HEYWOOD BROTHERS and Co.

BIRMINGHAM—THE BIRMINGHAM JOINT-STOCK BANK (LIMITED).

LEEDS—Messrs. BECKETT and Co.

YORKSHIRE—THE LONDON AND YORKSHIRE BANK (LIMITED).

BROKERS.

Messrs. GEORGE BURNAND and Co., 69, Lombard-street.

Messrs. LINDOW and KING, 19, Warwick-court.

SOLICITORS.

Messrs. BILLINGHURST and WOOD, 7, Bucklersbury.

SECRETARY (PRO TEMP.)

Mr. JOHN BARWIS.

The bonds of corporations and public bodies in this country, such as those of the City of London and the Metropolitan Board of Works, are well known and command a high value in the market. In America each separate municipality raises the necessary funds for public purposes, such as improving streets and constructing roads, bridges, school-houses, court-houses, city halls, and markets, by the issue of bonds for fixed periods, repayable by a sinking fund, and secured upon the taxable property of the district. The municipalities are legally empowered to issue bonds to the extent of from 5 to 10 per cent. upon the assessed value of all real and personal property, which assessed value in America does not usually exceed one-third of the saleable value.

The municipalities are bound by law to levy taxes upon the real and personal property of the whole district for payment of the interest and principal of bonds issued by them.

These bonds are as secure as mortgages or ground-rents. They are not affected by changes of Government, are not of a fluctuating nature, and, consequently, have become a favourite security for family settlements, savings-banks, insurance companies, and other trusts.

The savings-banks of New York State alone, according to the last Government report, hold an aggregate sum of over seventy-eight millions of dollars in municipal bonds, this being about one-fourth of their total assets.

The object of this trust is to acquire bonds of the nature described, and thus to secure to investors a safe and steady interest by judicious employment of the funds of the trust. A provisional contract has been entered into, and advantage taken of the recent depressed state of the American markets, for the purchase of bonds of various municipalities, at prices which will secure to the trust an average interest of at least 9*5* per cent., exclusive of the profit which will be derived from the periodic payment of the bonds at par from time to time, over an average period of say fifteen years. By this contract these bonds are guaranteed to be in conformity with law, and to be subsisting debts against the several municipalities issuing the same, and, further, that the entire indebtedness in no case exceeds 10 per cent. of the assessed value of the property for the loan. In ordinary times such securities are almost entirely absorbed in America, where the advantages they offer of high interest, combined with undoubted security, are fully understood; the present is, therefore, an exceptionally favourable opportunity for the formation of this trust.

Small investors will thus receive all the advantages of the large capitalist, reaping fixed and certain dividends, in addition to large prospective bonus.

The securities, in which the funds of the trust will be invested, will be lodged with the trustees for safe custody; but the selection of securities will be entrusted to the committee, who will hold office until the first general meeting of the certificate-holders, when their names will be submitted for re-election.

After payment of interest at the rate of 7 per cent. per annum, the current expenses, and providing for a reserve fund, the surplus income, together with the profit to be derived from the payment at par on the expiration of the various municipal bonds in which capital will be invested, will be applied to the drawings for the redemption of the A certificates and the accompanying B certificates. It is expected that these profits will enable the trust to terminate in about twenty years. The drawings will take place half-yearly or quarterly, as may be found most convenient, and will be made in the presence of a notary public and the committee, and will be open to any subscriber or his representative. The first drawing will take place at the earliest practicable period.

Subscribers will enjoy the following advantages:—

1st.—Investments widely distributed in exceptionally safe securities.

2nd.—Annual interest of 7 per cent.

3rd.—Bonus of 50 per cent. on the capital as the A certificates and the accompanying B certificates are drawn for redemption.

Subscriptions may, if desired, be paid in such securities as may come within the scope of the trust, at prices to be agreed upon by the certificate-holders' committee. Applications must be made in the form accompanying the prospectus.

The ordinary yearly expenses of offices and management have been fixed at 1*1* per cent. on the amount of capital. The remuneration of the trustees, committee, and auditors is fixed by the trust deed, and no other expenses will be incurred without the vote of a general meeting of the certificate-holders. The preliminary expenses, including ad valorem stamp, are limited to a charge of 1*1* per cent. on the amount of capital.

In cases where no allotment is made the deposit will be returned without deduction, and if a less number of certificates are allotted than are applied for the surplus deposit will be devoted to the payment due on allotment. Failure in payment of subsequent instalments will render prior payments liable to forfeiture.

Specimen certificates will be issued in exchange for the bankers' receipt for the amount payable on allotment.

Copies of the proposed Deed of Trust, subject to addition or alteration in any non-essential points and in matters of detail only, may be seen by intending subscribers at the offices of the solicitors, and (upon written application) of any known person a copy of the contract for purchase of securities will be produced by the solicitors.

Pro-forma and forms of application may be obtained from Messrs. MARTIN and Co., bankers, 68, Lombard-street, London, E.C.; the Liverpool Commercial Banking Company (Limited); the Birmingham Joint Stock Bank (Limited), Birmingham; Messrs. HEYWOOD BROTHERS and Co., Manchester; Messrs. BECKETT and Co., Leeds; the London and Yorkshire Bank; and Branches; Messrs. BILLINGHURST and WOOD, solicitors, 7, Bucklersbury, London, E.C.; Messrs. GEORGE BURNAND and Co., 69, Lombard-street, London, E.C.; Messrs. LINDOW and KING, 19, Warwick-court, London, E.C.; or from Messrs. J. H. RUDALL and SONS, Warwick-court, Philpot-lane, London, E.C., Agents to the Trust.

3rd December, 1873.

**M. CHARLES F. COLLOM,**  
MINING ENGINEER, INSPECTOR OF MINES, &c.

TAVISTOCK.

MANAGEMENT OF THE SOUTH DEVON FIRE-CLAY COMPANY.

Patentee of COLLOM'S PATENT REVOLVING FRAME for DRESSING TIN, AMALGAMATING GOLD, &c.

INVESTMENTS IN MINES ARRANGED FOR CAPITALISTS.

3rd December, 1873.

THE CREDIT FONCIER OF ENGLAND (LIMITED).

CLOSING OF THE LISTS.

Notice is hereby given, that the SUBSCRIPTION LISTS for the above will be closed on MONDAY next, the 8th instant, for LONDON, and on TUESDAY next, the 9th instant, at Twelve o'clock, for COUNTRY applications.

By order, H. J. BARKER, Financial Secretary.

St. Clement's House, Clement's lane, E.C., London, 3rd December, 1873.

MINING MACHINERY.

MESSRS. F. W. MICHELL AND CO. have FOR SALE several

CORNISH PUMPING, STAMPING, and WINDING ENGINES, of different sizes: BOILERS from 6 to 12 tons each; PITWORK of all sizes; CORNISH CRUSHERS; STAMP AXLES; IRON FLAT-RODS; STRAPPING PLATES; and other MATERIALS in general use in Mines, &c.

EAST CARN BREA, REDRUTH, CORNWALL.

HORIZONTAL ENGINES, of most approved construction, from 8 to 60 in. cylinder, for WINDING AND GENERAL PURPOSES.

Some good secondhand HORIZONTAL ENGINES ON SALE, single and in pairs, from 14 inches to 20 inches cylinders, suitable for winding, &c. GOOD BOILERS of all sizes.

CREASE AND CO., 39, CONGREVE STREET, BIRMINGHAM.

3rd December, 1873.

THE CREDIT FONCIER OF ENGLAND (LIMITED).

With interest payable quarterly by coupons attached.

Price of subscription, £97 10s. per £100 debenture.

Subscribers will be entitled to the Quarterly Interest Coupon, due 1st December, viz., £1 10s. per £100 debenture.

The net cost of each debenture is thereby reduced (after allowing for the discount on pre-payment of the instalments), to £95 12*1*, the debentures being redeemable at £100 each.

The debentures are redeemable by half-yearly drawings, commencing 1st December, 1874, the whole to be redeemed by 1st March, 1880.

Reckoning the profit on redemption at par, the return to the investor will be equal to over 7 per cent. per annum.

The Certificates will be issued to Bearer.

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Payments for each £100 A Certificate:—

£5	On application.
£10	On allotment.
£25	On 20th day of January, 1874.
£50	On 20th day of February, 1874.
£50	On 20th March, 1874.

The payments required for each £50 Certificate will be one-half of each of the above amounts.

One-third of the original amount of capital will be redeemed, by drawings, at par, out of the surplus interest and profits. With each A Certificate the corresponding B Certificate will be redeemed; when one-third of the A and B Certificates shall have been paid off, the securities representing the amount of the original capital will be realised and applied to the immediate redemption of the remaining A and B Certificates, and the Trust finally closed.

By this arrangement all the certificate holders will in like manner participate in the advantages of the Trust—i.e., they will receive, besides 7 per cent. interest per annum, a bonus (as represented by the B Certificates) of 50 per cent. on the invested capital.

The constitution of this Trust will provide for the investment of not more than 5 per cent. of the capital in any one security.

In the constitution of the Trust special care has been directed to the attainment of the two following objects:—First, to divide the investment among many carefully-selected securities; and, secondly, to ensure to the subscribers an equal share of the profits that will be made at the earliest possible date.

The debentures of the amount of the above capital has been guaranteed in Municipal Bonds.

TRUSTEES.

HON. CHARLES W. WENTWORTH FITZWILLIAM, M.P.

for Malton.

SIR SILLS JOHN GIBBONS, Bart., Alderman of London.

ANDREW JOHNSTON, Esq., M.P. for South Essex.

RICHARD B. MARTIN, Esq., Banker, Lombard-street.

JOHN G. TALBOT, Esq., M.P. for West Kent.

CERTIFICATE HOLDERS' COMMITTEE.

CHAIRMAN—CHARLES E. LEWIS, Esq., M.P., 8, Old Jewry.

DEPUTY-CHAIRMAN—HENRY CECIL RAIKES, Esq., M.P.,

95, Onslow-square.

SIR HARRY HOLYOAKE GOODRICKE, Bart., The Mythe, Tewkesbury.

JOHN COOKE HESTER, Esq., 1, Great Tower-street.

ADMIRAL W. W. HORNBY, Cromwell-road, S.W., and Knowsley, Prescot.

JOHN H. EVANS, Esq., 5, Fitzroy-square, Regent's Park.

WALTER JAMES LORD, Esq., Union-court, Old Broad-street.

EDWARD ROSS, Esq., 1, Jeffrey's-square, St Mary Axe.

GRANVILLE R. RYDER, Esq., Managing Director of the Lands Improvement Company.

CORRESPONDENTS IN NEW YORK.



## FOREIGN MINES.

UTAH (Silver-Lead).—Mr. Henry Sewell reports, under date Nov. 12: I returned from a visit to the Utah Silver-Lead Company yesterday, and made a thorough inspection of everything. I can say this is the first time I ever returned from that property without grumbling, and with a perfect satisfaction, since it was reported upon by me. The new tunnel has drained the mines up to the 100 feet level; all the ore above that tunnel (some 15,000 tons) is sent through a main winze into the cars below, which carry the ore direct to the stone-breaker, and there is no hoisting of any where, thus saving an immense cost. This new tunnel is above all the concentration works, and consequently the ore travel downwards through all the machinery, without interruption to manual labour of any amount. A new arm of rich galena has been made on the Dartmouth lode, and about 140 feet above the water line (that is of the new tunnel), which I am convinced is another great Bonanza. The mines are now worked for the first time since I reported on them, in a masterly manner, and proper working plans have been made by Mr. Longmaid. A mine without a working plan is the same as a vessel without a compass. As soon as funds arrive the new cross-cut to the Beltschazar will be completed, when I am certain we shall strike a third bonanza, so that we shall have three Van mines. I repeat again, ignorant management will ruin the best mining property, and it is useless for an engineer to report favourably on a mine unless he is allowed a voice in the management, which I was never allowed in the Utah. If the mines and stream supply enough water, which Mr. Longmaid is convinced they can, there will be a good mine in this Territory that will equal the Utah Silver-Lead Company's. I have always stated this, and stood by my statements. I have in-vested already some 9000. in this company, that my friends should have a practical proof of my convictions. I forward a piece of galena from the new shaft in the Dartmouth lode, only 25 feet from surface. I hope this news will gladden all the shareholders.

HORNACHOS.—J. Hancock, jun., Nov. 20: Descuidada: At the engine-shaft, sinking below the 25, fair progress is being made in the sinking; the lode is worth 1½ ton per fathom. The ground in the 23 south is more settled than it was, and the lode more regular. The lode in the 23 north is looking well, worth 2 tons of ore per fathom; the ground is hard for driving, consequently we are not able to make any very great progress.—Afortunada: The lode in the 20, north of No. 1 shaft, is 2 ft. wide, composed of quartz, muriatic, and stones of silver-lead ore. In the 20, south from No. 1 shaft, the lode is 9 in. wide, composed of dolomite, quartz, and silver lead ore. At No. 2 shaft, sinking below the 19, the lode is 3 ft. wide, and has very kindly appearance, worth 8 cwt. of silver-lead ore per fathom, mixed with silver-lead ore—a fine looking lode. The horse-whim at No. 1 shaft will be ready to go to work in a day or two, when we shall at once resume the sinking of the shaft below the 20.

NEW ROSARIO.—John Skewis, Oct. 28: Providencia: In the San Manuel end, driving south, we are now in about 30 varas from the shaft, and I am happy to say that the ore still continues very good. I am of opinion that this ore will get down as far as the junction with the Acosta lode. I should think that we ought to get down to the junction in about 80 varas from the shaft, and according to that we have got about 44 varas more to drive to get to the junction, where, by every appearance, we shall have plenty of good ore. If it only continues on as it is, and does not come any richer, we can say that ours are the kindest mines in this district. Just consider, the lode is 8 varas wide, and this ore continues we can say away any amount, and of a very good lode.—San Guillermo End, Driving North: This end is now driven about 25 varas from the shaft. I fancy from these last two or three days driving that the lode is improving, and this morning some very good looking pinitas came out from the last hole that was blasted.—San Juan Plat: This plat is looking much the same as when I wrote my last report. The ore is still continuing on, and looking very good. We are making some very good stops in this plat, where we shall be able to put a good many men to work after a little while. The men are going on very well with the malachite, and I think that they will finish it by the end of this week.—San Juan End, Rosario: This end is now driven about 15½ varas, and has just commenced to make an improvement. The small branch of lead that we cut about four days ago is still continuing on, and the ground about it is looking much more kindly for making ore very soon.

MALABAR GOLD WASHING.—G. B. O'Reilly: General Report on the Castilla Mines: Hitherto no regular report has been made to the board on the position and extent of these mines, and the steps taken towards bringing them into profitable working, owing to the difficulty experienced in examining such a large extent of ground in a manner satisfactory to the undersigned. Every effort has been made to effect this thoroughly, so that no uncertainty may exist in the future either as to the proper point for beginning operations, or the means best adapted for the advantageous working of the mines.—Map of Mines, Acapulca, &c.: To facilitate a clear understanding of the following remarks a map is sent herewith, of which the main features are taken from Mr. Welton's survey and the position of the lower aqueduct Bulkhead Pipe flume and outlet from careful measurements made by the undersigned.—Upper Acapulca: The upper ditch from A to B has been pushed forward as rapidly as possible. Owing to high banks and rocky ground towards the head some difficulty has been met with in driving the first 50 ft. We have still to flume a portion of this ground, so as to bring the water from Medina into the ditch, and to lay this flume we shall have to blast through some not very difficult rocks. It will also be necessary to secure the ditch in a few places, where it is exposed to landslips, by building up dry stone walls, or otherwise protecting the same. With the exception of the above piece, the rest of the ditch is in excellent ground, and the whole when completed can be kept in good order to carry 2500 lin. water at a nominal cost.—Lower Acapulca: At the point B the upper aqueduct terminates, discharging into the quebrada of Andriano, the head of the lower aqueduct, C. The ditch extending from C to D is now in course of completion and presents no difficulty of any sort, the whole length running through excellent ground.

Mosquitos are already dug 8 ft. on top, 4 ft. on bottom, ½ ft. deep ..... 900 ft. From Guadalupe 6 ft. on top, 3 ft. on bottom, ½ ft. deep ..... 895 ft.

Total completed ..... 1795 ft. From the end of the 1795 ft. completed to the point B, where the upper aqueduct terminates, the ground is all graded for digging out the ditch. 5205 ft.

Total length of upper ditch ..... 7000 ft. Lower ditch from C to D wall graded, and measures in length ..... 2250 ft.

Total length of aqueduct, A to D ..... 3250 ft.

Flumes on Upper Ditch: The head flume is the only difficult, and rather expensive, piece of work on the ditch, as we shall have considerable blasting to do, in order to open a course for the water to enter the ditch. This flume will be made 6 ft. wide 3 ft. sides, length about 150 ft.

Another flume will carry the aqueduct across the Guadalupe ravine 4 ft. wide, 3 ft. sides.

A third flume will take the water from the dam of lower ditch C into the head of the ditch ..... 40 ft.

Total length of flumes on ditch ..... 330 ft.

Of which no portion will be above 6 ft. from the ground. Besides these flumes we shall have to put on a few boxes at certain points to carry over the water of small streams which cross the course of the ditch.—Flume from End of Lower Ditch to Bulkhead E: The water will be carried over this piece of ground on a 350 ft. on a grade of 60 ft., in boxes 3 ft. wide, 2 ft. sides to the bulkhead E, from this point the pipe will extend 1700 ft. to the distributing box F, giving a fall or pressure in this distance of about 250 ft., of which nearly 200 ft. is the upper half of pipe. (See map.) As we have absolutely to open the mine in or near the point F it will be quite evident that our 1000 ft. of pipe is insufficient, and we would, therefore, specially call the board's attention to this point, and to the cost of at once supplying us with the additional pipe asked for in requisition (of which the duplicate is now sent).

Distributing Box, F: This will be equally indispensable. It must be borne in mind that we are opening on a very large scale, and in order to apply our ample supply of water to advantage we must have the means of putting on two monitors at the start, and we cannot do so without the distributing box and pipe. We refer the board to our requisition for details. Two 15-in. branch pipes will connect the distributing box with the monitors.—From the box, F, to the head of sluice, G, there is a fall of nearly 100 feet, which will greatly facilitate the running off of ground. After this place is cut down by ground sluices, boxes will probably be put in.—Sluice, G to H: As it is proposed to work on a large scale we have resolved to make the sluice of ample size, so as to avoid future inconvenience and expense. The sluice will measure 5 ft. on bottom, 2½ ft. sides, and will extend down the ravine 1000 ft. in length, with grade of ½ in. to 1 ft., the calculation being to run 2500 ft. of water through it. From tail of sluice, H, to Medina river the natural bed of the ravine, or quebrada, offers every facility for the discharge of tailings, and will admit of various undercurrents, as the fall is very rapid.—Old Spanish Ditch: This is partially traced on the map, and will show the great advantage we gain by opening a new ditch instead of re-establishing the old one, which comes over very high, and has broken ground some 3½ miles. It would have cost a vast deal of time and expense to have re-opened the ancient aqueduct.

General Remarks: The mines of Castilla, as will be seen by the map, extend over a very large superficial area, and contain, as far as we can now judge, very extensive deposits of gravel, which it will take a vast number of years to exhaust; and with the ample supply of water we can command at all seasons, we feel positive that these mines will give very satisfactory results if the ground is opened as we have indicated. The more we become acquainted with the range the stronger is our conviction of its value for hydraulic mining, and of the great facilities offered for working it. Should the board furnish us in time with the extra pipe, distributing box, quicksilver, &c., we expect to have the mine ready to begin running in March, or perhaps earlier. The board will please bear in mind that we are opening the mines on a far larger scale than has hitherto been attempted in this country, and as a consequence, we may have to spend a little more time and capital now in order to avoid doing so at a later period. The only economical way of opening is the one we have adopted after careful examination of the locality, and our aim has been to have all well done from the first start. The greatest difficulties of opening have now been nearly overcome: We have a fair supply of labour, our houses and that are partly finished, surveyors are buying getting lumber, roads have been opened, supply of provisions organised, and the greater part of our large aqueduct completed, so that we may now reasonably hope to bring the work to a successful issue before many months.—Other Mines: Should Castilla Mines prove successful, of which we can entertain no doubt, the company will possess several other mines in the immediate neighbourhood equally promising. As yet we have made no examination of these deposits, as all our time has been taken up with the work now in progress. We would add, however, that our aqueduct has been so planned as to command all the mine.

PONTGAUD.—W. H. Rickard, Dec. 1: Roure Mine: The sinking of the new engine-shaft below the adit, and the rise in the back of the 100 metre level continue to go on well. The driving of the 80 metre level north goes on very slowly, the ground being hard and very wet. The intermediate level between the 80 and 90 metres levels has opened a good piece of tribute ground, worth ½ ton of ore per current metre. The 60 metre level north yields saving of low quality. The winze behind this end is unproductive. The rise in the same level south opens good ground, worth ½ ton of ore per metre. The 40 metre level south yields stones of 1 ton. The same level north yields ½ ton of ore per metre. The 20 south is unproductive. The same level north yields a little saving work. The rise behind this end yields ½ ton per metre. The adit north yields a little saving work. The 20th of Mill shaft is in stiffer ground, and the lode is unproductive. The mill adit south opens tribute ground worth ½ ton of ore per current metre.—La Grange:

The sinking of Nosky's engine-shaft below the 100 metre level goes on favourably. The lode coming into the shaft yields good stones of ore, and promises well for the next level. The 100 cross-cut west has entered another band of lode ground, but yields nothing of value.—La Brousse: The 140 cross-cut east from Bassett's shaft has gone through the lode, which is 10 ft. wide, yielding ½ ton of ore per current metre. The 120 metre level south yields also ½ ton per metre. The 100 south continues to yield 1½ ton per current metre; the lode is hard and spare for opening. The 80 metre level south is unproductive. The winze behind this end is hoisted to the 100, opening a very good piece of ground, worth ½ ton per current metre. The 60 is poor. The winze below the 20 yields ½ ton per metre.—Pranal: The sinking of St. George's shaft is resumed, and the pumping machinery working very well indeed. The ground in the shaft is rather hard. The 70 metre level, north of St. George's, yields a little saving work. The same level on St. Matthew's lode yields ½ ton of ore per metre. The 70 south is unproductive. The 50, in the same direction, has produced stones of ore during the last month's driving, but is now poor. The 30 south yields a little saving work.—Surface: Our dressing throughout the mine has been carried on with full force. The samplings have amounted to 270 tons.—St. Amant: The trial cross-cuts both at the 45 and 25 metres levels are being pushed on with all dispatch, and the machinery works well.

## MINING NOTABILIA.

[EXTRACTS FROM OUR MINING CORRESPONDENCE.]

NEW ROSARIO.—At the general meeting of this company, held on Thursday, it was mentioned that although the shaft in the Providencia Mine is sunk to a depth of only 32 fms. from surface, and only two levels have yet been driven, from 30,000, to 40,000, worth of silver-ore has already been laid open, and can be stopped away and brought to surface as soon as arrangements for reducing the ore and extracting the silver have been concluded.

MENZENBERG.—The late important improvements in this mine still continue as encouraging as predicted by Capt. Roskilly. The lode cut into on Nov. 5, at a depth of 33½ fathoms from surface, has proved to be a fine masterly lode underlying south, producing beautiful grey, green and yellow copper ore, and having precisely the same characteristics as the lode in the adjoining mine (St. Josephberg) at the same depth, all when last reported on was not then cut through. This important discovery must be very gratifying to Messrs. John Kendall, Thos. Rosewarne, and Capt. Joseph Michell, and the other eminent practical men who have inspected and reported so favourably upon this property.

CENTRAL VAN.—The following is an extract from a letter just received by the directors from an experienced mining agent, who at their request has recently inspected the mine, and from whom a more detailed report is shortly expected:—"I have just been down the shaft. The drive north is right, and in accordance with my suggestions in September last, and although you have not reached the lode you have reached a point highly encouraging; the last 3 ft. is positively in the floor-kan side of the Van lode; it is full of white carbon, soft flokan, and spots of lead ore. In fact, it is just the thing. Your men hear the Van men working quite distinctly, and apparently over their heads. I questioned the men underground to-day and elicited all I could. The present end of north cross-cut is 3 ft. per fathom. Sink 12 fms., then cross-cut 6 fms., and you must certainly reach the lode. You have positively the goal in view, and you would be cowards not to reach it. I would do so myself if it were free to me. The Llywillys cross-cut should also be sent in direct to the Van lode, and you will get it. Do nothing else in this part. Your prospects are decidedly most cheering."—JAMES TREVETHAN."

BURRA BURRA (Kenwyn).—The 40 fm. level, east of the cross-course, continues to improve, and in a few fathoms more driving they will come under the rich course of copper ore which was met with and went down in the level above. Some very rich stones of lead were taken from the cross-course at the point of intersection, and can be seen at the office. Early in the ensuing week driving on this cross-course will be commenced to ascertain whether this rich deposit of lead continues, which, if it does so, will add materially to the returns. Last week a large cross-course was driven, and the machinery and pitwork are all in good working order, and dressing is progressing satisfactorily.

BAMPFYLDE.—S. Mitchell, Dec. 1: Saturday last being our setting-day we have, no doubt, found the South Mine lode, distant about 25 fms. south-east from shaft. A full pair or men are now driving on it at 5½ per fathom, and it looks exceedingly promising, and improves on the drivage. At the depth of nearly 6 fms. the sinking of new shaft for the present has been suspended to drive a level eastward on the lode to bank, to come out a little above boundary wall, and leave sufficient room for a small burrow. We have mining rights at a reasonable depth below ground from shaft for a considerable fathomage we gain backs, and yesterday some fine stones of ore as have ever been seen at Alt-y-Crib were broken from the lode. The work at other points at South Mine is progressing favourably, and I hope in a short time to have the ground sufficiently opened up to enable us to break ore in something like quantity. In the engine-shaft and deep adit explorations are going forward, which in my next I may have to report favourably upon.

ASSEHETON.—M. Whitford, Dec. 2: The sinking of Mawr shaft is progressing favourably, the lode is about 2 ft. wide, and intermixed with small cubes of lead. In the 40 end west ground and lode much the same as they have been for some time past. The 30 end west is worth from 25 to 30 per fathom. The various stope in back of the 30 are much the same as last reported on. The preparations necessary for sinking Browne's shaft are not yet completed, but are being urged on as fast as possible. The winze sinking below the 20 east is worth from 20 to 25 cwt. of lead and blonde per fathom. The stope in back of the 8, west of Mawr shaft, is worth 2 tons of lead per fathom. The machinery and pitwork are all in good working order, and dressing is progressing satisfactorily.

BEDFORD CONSOLS.—S. Mitchell, Dec. 1: The lode in the 40 end west of No. 4 shaft, by four men, at 4½ per fathom; the lode is worth 13½ per fm.

One stope in the back of the 102, west of same shaft, by four men, at 3½, 12½ per fathom; the lode is worth at least 20½ per fathom. Two other stope in back of the lode on the north side of the Van lode; it is full of white carbon, soft flokan, and spots of lead ore. In fact, it is just the thing. Your men hear the Van men working quite distinctly, and apparently over their heads. I questioned the men underground to-day and elicited all I could. The present end of north cross-cut is 3 ft. per fathom. Sink 12 fms., then cross-cut 6 fms., and you must certainly reach the lode. You have positively the goal in view, and you would be cowards not to reach it. I would do so myself if it were free to me. The Llywillys cross-cut should also be sent in direct to the Van lode, and you will get it. Do nothing else in this part. Your prospects are decidedly most cheering."—JAMES TREVETHAN."

BEDFORD CONSOLS.—George Rowe, Joseph Mitchell, Dec. 3: The lode in the 40 end west ground and lode much the same as last reported on. The preparations necessary for sinking Browne's shaft are not yet completed, but are being urged on as fast as possible. The winze sinking below the 20 east is worth from 20 to 25 cwt. of lead and blonde per fathom. The stope in back of the 8, west of Mawr shaft, is worth 2 tons of lead per fathom. The machinery and pitwork are all in good working order, and dressing is progressing satisfactorily.

BEDFORD UNITED.—Telegrams: W. Phillips, Dec. 1: The north lode in back of the 115 east, referred to in general report, is improved to upwards of 4½ per fathom.

Dec. 3: The south part of the lode in back of the 115 east is to-day worth 50½ per fathom.

BEDFORD UNITED.—W. Phillips, Dec. 4: Our operations on both the north and south lodes are mostly by the side of the lodes at present. By telegrams you have been informed of the gradual improvement of the lode in the back of the 115 east, or midway level, on the south part of the lode, which is now over 4 ft. wide, and worth about 50½ per fathom. This is the main part of the lode, and will, no doubt, be intersected shortly in the 115 east.

BELSTONE.—James Neill, Nov. 29: A Shaft: The ground in the bottom is a little more favourable for sinking, there being more killas mixed with the strata. If this change continues greater speed will be made in addition to what has been sunk this week. The men are working well, and fair progress is being made.

BEDFORD UNITED.—The lode in the 57 end, west of engine shaft, is for 4 ft. wide principally capel and spar, containing strong mundic and occasional stones of copper ore.

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BEDFORD UNITED.—The lode in the 57 end, west of shaft, continues to show the same kind apparently as for some time past; the men are working well, and fair progress is being made.

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BLAEN CAELAN.—Dec. 3: There is no important change in the mine since this map was underground on Friday last. The lode in Balacombe's cross-cut, driving from the 2½, east of shaft, continues to hold on, and I have re-set the same at 12½ per fathom.

The ground driven last month was 1 fm. 2 ft. 6 in., and the total length of this cross-cut from the north side of the 20 to the present end is 10 fm. 1 ft. 6 in., and all in lode.

The new adit, south of the Caelan river, I have re-set to four men, at 14½ per fathom; the distance driven last month was 2 fms. 4 ft., and the total length of the level from the mouth of arching is now 10 fm. 5 ft.

BOG.—W. T. Harris, J. Barkell, Dec. 3: Good progress is being made in sinking the engine-shaft below the 163 fm. level, and the lode looking more favourable for lead; now producing some saving work for the dressing-floors. We have not yet succeeded in driving the water from the old workings below the 163 fm. level, but if we should get into more open ground in the bottom of the shaft which we are very likely to do, this water would speedily go down, and enable us to begin to work on rich ore ground at once. There is no change in our tribute department since we last setting report last week.

BRYNAMBOR.—G. Sparke, Dec. 3: Our pay-day (Saturday) went off satisfactorily. The 32 east has been driven during the past month 3 fms., 2 ft. 6 in. The lode throughout the drivage presents indications of being productive of lead; I, therefore, think it advisable to cross-cut the south part of the lode at the present forebreast, to ascertain if there is lead standing in that direction, as well as to prove the size of the lode. I have suspended the driving on the north part of the lode for the present and to put the men cross-cutting, stoned the month, or to be stopped when thought proper, at 7½, 10½ per fathom, including all cost. The 32 fm. level west has been extended during the month 5 ft.; lode in present forebreast somewhat improved, and water is issuing from the north wall; an improvement may be expected very

my last report the water has gone down gradually in the sump of the 80, and with the aid of a turn tree I hope to get it all out within a week. I send you by train to-day specimens of the ore, by which you will see the lead is improving, there being less juck, and the appearance more and more favourable.

CEPEN BRWYNO.—J. Paul, Dec. 2: I beg to hand you the cost-sheets and report on this mine. The lode in the 104 east is 3 ft. wide, containing spar, blends, and clay-slate, with a little lead ore, but not sufficient to value; I expect an improvement here shortly. The lode in the two pitches over the 104 east will produce on an average 18 cwt. of lead ore per fathom. In the pitch below the 92 west the lode is worth 1 ton of lead ore per fathom. The pitch over the 56 east is producing 18 cwt. of lead ore per fathom. The dressing, &c., is being proceeded with as fast as possible, and we shall shortly have another 20 tons of lead ore ready for the market.

CENTRAL VAN.—James Martin, Nov. 28: The shaftmen will commence at once to cut the ground for the lift, and put dam in the level. Captain Treveithan has been down the shaft, and we have come to the opinion that we have reached soft part of the Van lode, and must now sink about 100 fms. deeper with all speed.

CRENVER AND WHEAL ABRAHAM UNITED.—W. Thomas, J. Vivian, Dec. 3: The lode in Sturt's engine-shaft is without change since last end advised, we shall complete the sinking of this lift this week, when we shall bed plank and ease the shaft to the bottom preparatory to driving east and west at that point. In the 215, driving west of shaft, the lode is 1½ ft. wide, yielding 1 ton of copper ore per fathom; we may expect an improvement here shortly, as the end is letting out water freely.—Crenver Shaft: In the rise in the back of the 160 the lode is 2 ft. wide, producing good stones of tin. The lode in the 130, driving east of shaft, is 2½ ft. wide, having a kindly appearance. The lode in the 130, driving east of shaft, is 2 ft. wide, producing stones of tin.—St. George's Shaft: In the 200, driving east on the south lode, west of shaft, the lode is 2 ft. wide, yielding 1 ton of copper ore per fathom.—Pelly's Engine Shaft: The 234 end driving west is yielding 4 tons of copper ore per fathom; we are making good progress here. In the winze sinking 46, west of engine-shaft; this is no doubt connected with the course of ore gone down under the 220, west of shaft, the lode is 4 ft. wide, yielding 2 tons of copper ore per fathom, and looks kindly for further improvement.—Pelly's Shaft: In the 220, driving west, the lode is 3 feet wide, producing stones of tin; during the week this end has been disordered by cross-heads.—Richard's Shaft: In the 200, driving west, the lode is 2½ ft. wide, yielding good stones of tin, and letting out water freely, which is a good indication. Next Saturday is our usual setting-day, and next week a fully detailed report will be sent. There are employed this week on tutwork, 127 men and boys; tribute, 44 men and boys; surface, 53 men and boys. Total, 223.

CWM DWYFOR.—John Roberts, Dec. 4: We are still widening the old lead shaft, and shall begin to sink as soon as we have cut it down to the bottom, which is altogether about 5 fms. from surface. The north cross cut, or 10 fm. level, is now being driven towards this lode, which we expect to intersect in three or four weeks. The end is at present in hard ground. In the south cross-cut we have commenced to drive east on the large lode, from which we have taken some fine lead. We are at present carrying only the north part of the lode, which is widening as we go east. There is another lead lode, or branch, still further south, which will probably fall into this lode in depth.

CWM ELAN.—Wm. Goldsworthy, Nov. 29: The ground in the engine-shaft is still bad and wet, sinking therefore is slow. The stope in the back of the 10, east of shaft, will produce 5 cwt. of lead per fathom. No. 1 stope in the back of the 10 west will yield from 10 to 12 cwt. of lead and blends ore per fathom. In No. 2 stope, back of said level, the lode has in proved since last report, worth 20 cwt. of lead. We are at present carrying only the north part of the lode, which is widening as we go east. There is another lead lode, or branch, still further south, which will probably fall into this lode in depth.

DENBIGHSHIRE CONSOLIDATED.—John Pryor, Dec. 4: Phoenix Engine Shaft: The 112, driving east, is still without change; ground hard, and the dip of the measures continuing flat. In the incline above this level we look better to day for lead, having three good days drawings of very fair lead stuff to send up to surface.—Quaker's Shaft: In the 112 west the matrix of the lode is everything we could wish to see, and I believe there is lead ore not far from us. The rise above the 68 has shown ore to-day. In the cross-cut out of the same level, the stones that are broken are full of small veins of lead; we think there is something good at hand.—Parry's Shaft: We have followed the lode in the bottom of the 48 east 3 yards deep, and from appearance believe that the base runs right back under the level, towards the sump. I have, therefore, placed the men to sink the latter, and there is a change coming in the lode at the present bottom. When we get deeper, and through the sand, I believe we shall find a good deposit of ore, as it was in similar ground the various mines made their greatest riches.

EAST BALLESWIDDEN.—T. Trahar, Dec. 3: The branch of tin discovered on the Rose lode is producing good staves of tin. The lode in the stopes at the back of the 100 east is large, saving work for tin. The lode in the back of the 30 fm. level, west of engine shaft, never looked better. The lode in the 20 end, driving west from Morgan shaft, is looking just as when last reported on. The stamps and machinery are working well.

EAST BLACK CRAIG.—T. Cogar, J. Bowy, Dec. 3: The 108 fm. level end, driving east of shaft, has improved for lead, although the black stone is still in a confused state. We intend cross-cutting north at this point, where we will have good lead; we shall by doing so prove the width and value of the lode. The stopes west from winze continue to look well, worth 20c. per fathom for lead. The stripping side of the level, west of west cross-cut, still holds good, worth 20c. per fm. for lead. The 98 fm. level end, driving east from shaft, is scarcely up to last report, but the ground is very congenial for lead. The stripping side of the level, west of cross-cut, west of shaft, is worth 15c. per fathom for lead, opening out east side of cross-cut towards the stopes is worth 15c. per fathom for lead. The stopes are fully as good as ever. The winze sinking below the 52 is yielding 1 ton of blends, with a little lead. The Fairlaine trial has improved since last reported on, now worth 10c. per fathom for lead in the bottom of the winze. The weather has been against our getting on well with the new engine-house. Machinery, and other surface work going on well.

EAST BOSCASTLE.—William Eddy, Dec. 3: The 150 west was driven last month 2 fms. 4 ft. 9 in.; the lode is small and poor. The lode in the 130 and west is producing good tin-tuff. In the 120 end driving on the side the lode is worth 8c. per fathom. The lode in the 120 fms. level driving on our main lode produces stamping work for tin.

EAST CARADON.—J. Kellow, T. Trelease, Dec. 3: Child's Lode: The 100 east is 1½ ft. wide—chiefly carpet. In the 40 west the lode continues without alteration.—Caunter Lode: The 115 east is 4 ft. wide, spotted with ore.—Secondon's Lode: The 90 east is 4 ft. wide, chiefly gossan.—Mark's Lode: The shaft sinking below the 72 is 1 foot wide, spotted with ore. The 72 east is composed of pebbles and quartz, spotted with ore; it continues to let out more water. In the winze sinking below the 50 the lode is 1½ fm. wide, spotted with ore. The most promising part of the lode is dipping east, and getting out of the winze.

EAST CHIVERTON.—R. Southey, Dec. 3: During the past fortnight the ground in the bottom end is become a little harder for driving, but this change in the rock we consider very favourable for the production of silver-lead ore, at the same time, less expensive for timber; we are pushing on this end with all possible dispatch in order to get under the shoot of minerals gone down in the level above. The lode in the 52, east of shaft, has a very fine appearance; is about 3 ft. wide, composed of mundic, blends, and also carrying a great deal of white iron on the south wall. I am much pleased to see the lode containing the latter, as it is the best indication that we could possibly see in the ground for further improvement, which we hope shortly to be able to report. Nothing new to report about in the western end since my last. The stope in the back of the 40 still continues to yield some very good silver-lead ore.

EAST WHEAL BASSUT.—Richard Pryor and Son, Nicholas Bartle, Dec. 3: Setting Report: On Friday last we set the following bargains.—North Lode: The 110 to drive west of cross-cut, by six men, at 9c. per fathom; the lode is 4 ft. wide, worth for tin 10c. per fathom. No. 1 stope, in back of ditto, by six men, at 4 ft. 10c. per fathom; the lode is 1 ft. wide, per fathom. No. 2 stope, in back of ditto, by six men, at 4 ft. per fathom; the lode is 6c. per fathom. No. 3 stope, in bottom of ditto, by eight men, at 8c. per fathom; the lode is worth 20c. per fathom. The 90 to drive west of cross-cut, by two men, at 12c. per fathom; the lode is worth 10c. per fathom; the lode is 1 ft. wide, per fathom. The 70 to drive west of cross-cut, by nine men, at 12c. per fathom; the lode is worth 15c. per fathom. The 70 to drive west of cross-cut, by six men, at 4 ft. 10c. per fathom; the lode is worth 7c. per fathom. No. 1 stope, in back of ditto, by six men, at 4 ft. 10c. per fathom; the lode is worth 8c. per fathom. No. 3 stope, in bottom of ditto, by four men, at 4 ft. 10c. per fathom; the lode is worth 7c. per fathom. The 50 to drive west of rise, by four men, at 8c. per fathom; the lode is worth 8c. per fathom. A stope in back of ditto, by four men, at 4 ft. 15c. per fathom; the lode is worth 6c. per fathom. Our pay and setting passed off satisfactorily.

EAST WHEAL GRENVILLE.—E. Hosking, W. Bennetts, Nov. 29: The mine is looking just the same as reported on Thursday last.

EAST WHEAL GRENVILLE.—E. Hosking, W. Bennetts, Dec. 4: The lode in the engine-shaft sinking below the 120 is 2 ft. wide, producing a little tin and copper. The lode in the 120, west of engine-shaft, is 2½ ft. wide, and worth 8c. per fathom. The 120 cross-cut is without change. The lode in the 110, east of engine-shaft, is 18 in. wide, producing saving work for tin. The lode in the 95 east is 3 ft. wide, and worth 10c. per fathom. The winze below the 95 east is worth 2½ c. to 3 tons of copper ore per fathom. The stope above the 95 east is worth 8c. per fathom. The stope above the 95, west of winze, is worth 12c. per fathom. The stope below the 95 east is worth 8c. per fathom.

EAST WHEAL LOVELL.—R. Quenliffe, Dec. 3: The mine throughout is looking just the same as reported last week.

EAST WHEAL SETON.—W. Pascal, Henry Arthur, Dec. 4: The lode in Cartwright's shaft, sinking below the 45 fm. level, is about the same as last reported—4 ft. wide, and worth 4 tons of ore per fathom. The lode in the winze sinking below the 45 fm. level, west of shaft, is worth 2 tons of ore per fathom.—Henrietta: We have had more ground to cut for the dam at the 50 than we first calculated, but the masons are now engaged in building the dam day and night, and hope to finish it in a day or two; as soon as completed we shall resume the driving of the 70.

FRANK MILLS.—F. Cornish, N. Adomez, Nov. 29: Since our last report we have an important improvement in the stope in back of the 45, north of Orchard air-shaft, where we have a lode worth fully 1 ton of lead ore per fathom; this is in future likely to prove a very productive piece of ground; every possible exertion is being used at this point. The level driving south at the 45 has been communicated to the south level driven on another branch in an oblique direction. The winze sinking below the 100 is still in a large hard iron lode, which is an immense size, but our prospects in sinking is rather slow. The iron stopes in the back of the 100 north continues very productive for iron ore; lode 4 ft. wide, of good quality. The stope in the back of the 115 north continues to yield their usual large quantities of iron ore. The opening out ground at the 115 north preparatory to putting up a rise to communicate with the 100 winze is almost completed. There is another change throughout the mine.

FRANCO CONSOLS.—Wm. Dodge, Dec. 2: In the shallow adit west we have again taken off about 1 ft. of the lode from the bottom part of the level, where it is still showing a very kindly appearance, and producing a little tin.

GAWTON COPPER.—G. Rose, G. Rose, jun., Nov. 29: The lode in the 105, east of King's engine-shaft, is without change in character, being 6 feet wide, yielding good stones of ore. We still continue to cross-cut through the south part of the lode some short distance behind the 105 end, where we find a very large kind lode going down over 6 feet wide, producing capel, spar, and mundic, intermixed with good quality ore. The lode in the 95 east has not been taken down during the past week. The south part of the lode carried in the drivage at the 95 is 5 ft. wide, principally composed of quartz, intermixed with mundic and good quality yellow copper ore. The lode in the winze and stope in the bottom of the 92 east is worth 10c. per fathom. The lode in the 105 and stope in the back of the 92 is worth 10c. per fathom. Weight-stope in the back of the same level, is worth 14c. per

fathom. The lode in the stopes in the back of the 70 east is worth 10c. per fathom. Our last sampling of ore weighed off yesterday 147 tons 14 cwt. 2 qrs.

Glasgow CARADON CONSOLS.—W. Taylor, W. J. Taylor, Dec. 2: The lode in the 78 fm. level west is worth 10c. per fathom; but the ground here is more favourable, and we hope to get an improved lode shortly. In the 78 fm. level east the lode is large, but rather disordered, worth about 18c. per fathom; we are expecting to see this end improve also, as we have a good lode gone down in the winze sinking from the 65 fm. level, which is now getting near to this level and but a short distance before it, worth 20c. per fathom. We are pushing on to communicate these points as early as possible. In the 65 fm. level east the lode is still divided, the north part a little improved, worth 10c. per fathom, with a part standing to the south worth from 10c. to 12c. per fathom. No change in any of the other drivings. We have commenced a rise in the back of the 45 fm. level, where we intend making a new shaft in the eastern ground; we shall get up as far possible before we commence opening on the top. No change to notice in the stopes; on the whole, they continue about the same value as last reported. The computed quantity of ore for the next sale is 280 tons, which will be sold on the 18th Dec.

GORSEDD AND CELYN LEVEL.—W. Edwards, Dec. 4: We are still making good progress in sinking the Coetia Glynen pit considering the nature of the ground.

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GORSedd AND CELYN LEVEL.—W. Edwards, Dec. 4: We are still making good progress in every operation.

GREAT ROCK.—J. Kemp, Dec. 4: The ground in back of deep level, east of the cross-cut, having become poor, I have put the men to sink in bottom of the level. We are getting some good stones of ore in this sinking, but not regular. The lode west of deep cross-cut is much the same as last reported, spotted throughout with lead, but not to value, and it is a great wonder that a lode with two such well-defined walls of spotted ore as this does not produce a great quantity of ore.

GREAT WEST VAN.—James Roach, Dec. 4: There is a good rib of ore in the 46, west of engine-shaft; this is no doubt connected with the course of ore gone down under the 34. The winze below this level is in a porous lode and a good course of ore, but the water has so increased as to cause the suspension of sinking; we daily expect to drain this by extending the 48. The 34 east is still yielding 2 tons of ore per fathom. The 34 west is in a beautiful lode, upwards of 10 feet wide, and is yielding 2½ tons of lead per fathom. A winze sinking under the 22, and now from 12 to 13 fms. in advance of the 34 end, is improving, and now produces 1½ ton of lead per fathom. Stopes without change. In Eliza's engine-shaft the men have commenced their contract, and we hope to make satisfactory progress in sinking. All other bargains are let for the present month. We are dressing fast, and shall sample another parcel of ore at an early date.

GREAT WHEAL LOVELL.—John Bray, Dec. 4: In Hitchins's shaft, sinking below the 54, fair progress is being made, and the lode is improving as depth is obtained, being 18 in. wide, and worth 2½ cwt. of tin to the ton of ore, the highest produce obtained below the 34. The standing lift at the 34, penthouse, brace, &c., and all fixed, and the greater part of the water at and above the 34 taken up and thrown into the elstern, so that the bottom of the shaft is comparatively dry for sinking. The 34 west is looking more promising than I have seen for some time; the lode is 18 in. wide, producing stamping work. There is nothing to notice in the 34 east; the ground north of the lode is very hard for driving. I am in hopes that the ground is more favourable to the south, consequently I have put the men to open the south side to prove it, also with an idea to cross-cut to the south lode, which in the level above is about 9 ft. from the north lode. Since we have had some dry weather the water has abated, which is telling upon the consumption of coal.

GWESTY CONSOLS.—Wm. Pearce, Dec. 3: On Saturday last, being our pay and setting day, I set the deep adit cross-cut to drive south to cut the van lode, at 4 ft. 17s. 6d. per fathom; driven in the past month 5 fms. 6 in. We continue to drive west of cross-cut which I have alluded to in my previous reports; I should judge from the appearance of the ground we are drawing near the lode; the cross-cut is composed of lime-spar, clay-slate, prism, spar, and cubes of lead; the water that is issuing through the ground is highly mineralised with oxide of lead; it appears that we are just verging on a large deposit of lead.

GWYDYL PARK CONSOLS.—W. Bennetts, Dec. 3: In the 25 end east the lode at present is small and poor, but I think by the appearance of the lode that it will soon improve. The stopes in the back of the 25, on the east and west lode, are not looking so well for lead as last reported. The lode does not appear to make much above the roof of the 25, as I have often remarked in my reports that the lode was of much more value in the bottom part of the end than it was in the roof. In the 25 end south the lode is 4 ft. wide, and of a very kindly appearance.

HINGSTON DOWNS CONSOLS.—J. Richards, Dec. 4: Bailey's Shaft: At the 150 fm. level 11 ft. has been driven west up to Saturday last by the side of the lode, and the cutting of top and trip flats at this level has been commenced. This work, with the enlarging of the triple plat at the 140 fm. level, cutting down the penthouse, bringing down skip road, dividing the shaft, putting in footway, &c., will occupy about three months; the lode, however, in cutting the flats, will be taken down, and will be reported upon as we proceed. In the 140 fm. level west the lode is less disordered and is improved, being at present worth 15c. per fathom. In Wedge's winze below the 120 fm. level west, sinking progresses very fairly, and, as before mentioned, we hope to effect a communication with the 140 fm. level below in the course of a fortnight. Two stopes are being worked in the back of the 120 fm. level west; one to the east of Griffin's winze, worth 12c. per fathom, the other west of James's winze, worth 15c. per fathom. We sampled at Calstock, on Friday last, 164 tons, and a parcel of 71 tons has been reserved for continuing the experiments for the extraction of the tin found in combination with the copper ores, the total sampling being 235 tons.

HOBBS HILL.—Dec. 3: The 48 heads of stamps are now completed. It during the next four weeks we have favourable weather for working in the quarry, and the dressing is not hindered by frost, we shall be able to form a fair estimate of the amount of crop we can produce in that time. Provision has yet to be made for chipping and dressing the slimes.

HOLLOW.—R. Pryor, Dec. 2: We have completed cutting down the engine shaft as deep as the bottom of the perpendicular, a depth of about 25 fms. from surface. We are glad to find the shaft is much larger than the under, and the stope will be deposited in the large excavations that are near the same, thereby saving the expense of drawing it to surface, as heretofore. All things at surface are progressing satisfactorily, and we have no further change to report this week.

ISLAY (Lead).—H. B. Vercoe, Dec. 1: We have now a full body of efficient miners. The mine is opening up, and looks much better than for some time past. Good discoveries may be looked for shortly, which will considerably increase our present returns. Our present stopes are as under.—The 35 fm. level, east and west, lode, is worth 12c. per fathom. The 25, north winze, is worth 20c. per fathom. The 35 north is worth 6c. per fathom. The 45 is being driven west by six men, very hard and wet, consequently slow progress is being made; the lode is 6 ft. wide, presenting a splendid appearance.

LADYWELL.—A. Waters, Dec. 4: Everything going on here as usual, and the mine continues to show indications of a prosperous future. Full report, with setting-list, next week.

MATGHOLD HEAD.—Capt. J. Nancarrow, Dec. 2: I have no particular change to report to you since my last in either of the mines, with the exception of the end driving north of the Cairnhill shaft on No. 5 lode, which has greatly improved, and now worth 6 tons of ore per fathom, with every indication of a further improvement. All other points are fairly progressing, and precisely of the same character and value as reported last week. A full report of setting, &c., will be sent next week.

MEDLYN MOOR.—J. Rowe, Dec. 3: The air shaft is sunk 14 feet below the 6 fm. level; the lode is 3 feet wide, worth 20c. per fathom; the ground is getting settled, and I am glad to find that the lode is improving in depth. In driving the 6 fm. level, west of the air-shaft, we held to some old workings; we find the lode taken away west to a considerable extent—a proof that the old men must have had a good bunch of tin to the west of the cross-cut; they are deeper than our 6 fm. level. We have suspended operations here until we get deeper. The power for pumping which the old men had was very limited, so they could not have sunk much below our 6 fm. level. We have resumed sinking the shaft. The stope in the back of the 6 fm. level is worth 5c. per fathom. This stope is worked nearly to surface.

MENGLES.—J. Rowe, Dec. 4: There is no change in the deep adit cross-cut south of Jenkins's shaft; the killas is highly favourable, and we are driving with good speed. The new shaft is communicated to the old workings on the copper and blonde lode; this has given us plenty of air. We have commenced driving the middle adit east of the shaft; the lode is 2 ft. wide, 1 ft. of it rich for mundic, which I believe contains copper and silver. We shall break a few tons, and get it sampled both for copper and silver.

NEW DOLCOATH.—J. Vivian and Son, N. Clymo, Dec. 4: The stope west of sink, under the 140 fm. level, west of east shaft, produces 2 tons of copper ore per fathom, of rich quality. The 33 fm. level, west of engine shaft, is opening the a lode 2 ft. wide, yielding rich copper and tin ores, worth about 5c. per fathom. The stope in the end of the rise over the 33 fm. level, west of engine shaft, produces 1½ ton of copper ore per fathom, and some rich tinstone, making it worth about 10c. per fathom.

NEW GREAT CONSOLS.—Richard Pryor, Henry Bennetts, H. Tregonnion, Dec. 2: There is no change to notice in any of our

of the engine-shaft, on the deep adit level, and I hope to get this completed this week up to the end or fore-bast, after which I shall put four men to drive east upon the course of Gwilliam's lode, east of the south cross-cut, instead of No. 2 adit, as I consider it will be much better, all in new and unwrought ground, and quite likely to lead to good discoveries being made. The tributaries in the middle adit level are marking good progress and earning good wages in the north lode, in the Green Hill side, all in new ground.

**PERSEVERANCE.**—Wm. Rich, Wm. Hamblin, Dec. 2: The engine-shaft is in full course of sinking by two men below the 50 fm. level; we have a hard floor of clay in the bottom, which renders the sinking slow. The ground in the 50 west is easy for driving, and the lode carries a little tin. The stopes in the back of the 50 is worth 10<sup>l</sup>. per fathom.

**PHENIX (Silver-Lead).**—Richard Pryor, Edward Adams, Dec. 3: Setting Report: On Friday last we set the following bargains:—The engine-shaft to sink below the 60 by nine men, at 28<sup>l</sup>. per fathom; the lode is 6 ft. wide, and producing fully 1 ton of lead per fathom. Nothing can be more encouraging than the present appearance of this lode, the underlay of which is lessening, and consequently, its production of lead increasing. The 60 to drive south of shaft by 4 ft. per fathom; the lode is 2 ft. wide, and producing 6 cwt. of lead per fm. A stop in back of ditto, by four men, at 32<sup>l</sup>. per fathom; the lode is 3 ft. wide, and producing 10 cwt. of lead per fathom. The 60 to drive north of shaft by four men, at 7 ft. 10<sup>l</sup>. per fathom; the lode is 4 ft. wide, and producing 3 cwt. of lead per fathom. A winze to sink below the 50, south of shaft, by six men, at 6 ft. per fathom; the lode is 1 ft. wide, and producing 5 cwt. of lead per fathom. Our pay and setting passed off well.

**PRINCE OF WALES.**—J. Gifford, F. Phillips, Dec. 2: In the 90 east we have

driven by the side of the lode about 2 fms., and from appearance it is promising to be large, and of equal, if not greater, value than when last taken down. Water is flowing very freely from the end, and altogether it has a good appearance. The lode will be taken down very shortly.

In the 90 west the driving is continued by the side of lode, which is 2 ft. wide, composed of pebbles, quartz, tin, and copper ores, worth 10<sup>l</sup>. per fathom, and appears to be considerably better than the back of the level.

The fact of this end being a considerable distance ahead of any other level in this direction, the improved appearance of the lode, and the congenial ground by the side of it, seems to warrant the expectation of results equal to those realized further west some years ago. In the stopes and pitches, as also in Silver lode, there is no change.

**REDMOOR.**—J. Gifford, Dec. 4: In the 34 cross-cut south no more lode has been met with, but the end is letting out more water.

**RESTRONGUET.**—Dec. 3: The ground in the deep adit level continues about the same. In the No. 1 level, driving north, the gravel is about 1 foot thick of good quality. In the cross level driving north from No. 1, the ground is 2 ft. 6 in. thick of fair quality.

In the cross level driving south from No. 1, the gravel is about 18 in. thick of good quality. In the air level driving north from No. 1, the gravel is now 15 in. thick of good quality.

The air level driving south from No. 1, pass has improved for the last 6 ft. we have had gravel about 18 in. thick of fair quality. The level driving east from No. 1 pass in old workings: we expect to get clear of them shortly.

In the stripping ground east from No. 1, in the first air level, the gravel is 3 ft. 6 in. thick, of fair quality. In the stripping ground west from No. 1, in the first air level, the gravel is about 15 in. thick, of good quality.

**REIDOL.**—John Ridge, Nov. 29: Blaurygas Lode: In the deep adit level west the lode is 3 ft. wide, yielding strings of lead and blonde, but not sufficient to put a value on. The character of the lode is much the same as in midway before we entered the pipe of ore.—Alltidda Lode: In the 10, driving west, the lode is 4 feet wide, yielding 12 cwt. of blonde and 3 to 4 cwt. of lead ore per fathom. The lode in the 10 east is 5 feet wide, a strong ore lode, yielding from 1½ to 2 tons of blonde per fathom, and 3 cwt. of lead ore. The skip road is completed, but we have not commenced to draw, as Mr. Ellis disappointed us in not casting wheels for it. I had to go to Aberty to obtain them: they are now cast, and we shall have them on Monday. I shall be glad to hear from you with respect to the work to be carried on, and the number of hands to be employed, as the men will finish what I have let them next week.

**ROMAN GRAVELS.**—A. Waters, Dec. 4: The mine throughout never looked

better with respect to the future than now. Full report and setting-list next week.

**ROOKHOPE VALLEY.**—J. Manley, Nov. 28: Setting Report: On Friday last we set the following bargains:—The rise over the 42 east, to two men, at 14<sup>l</sup>. per fathom; this rise is now 11 fm. 5 ft. 1 in., leaving about 6 ft. more to hole; this we shall accomplish by the end of next week, as we can hear the men very plain through the ground.

The engine-shaft has been sunk the required depth for the main cross-cut and the skip cut.

The men are now engaged in casing down the shaft and putting in copper, as well as laying down tramway; this will all be completed

in the coming week, when levels both east and west will be started without let or hindrance in a large and strong lode, composed of flint spar charged with lead ore.

I look forward to an early improvement at these points.

The 25 east has been driven in the last month 6 fm. 5 ft. 1 in., lode worth 10 cwt. lead ore per fathom, and 3 cwt. of lead ore.

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**ROMAN GRAVELS.**—A. Waters, Dec. 4: The mine throughout never looked

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**ROOKHOPE VALLEY.**—J. Manley, Nov. 28: Setting Report: On Friday last we set the following bargains:—The rise over the 42 east, to two men, at 14<sup>l</sup>. per fathom; this rise is now 11 fm. 5 ft. 1 in., leaving about 6 ft. more to hole; this we shall accomplish by the end of next week, as we can hear the men very plain through the ground.

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The men are now engaged in casing down the shaft and putting in copper, as well as laying down tramway; this will all be completed

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was equally good at that point. The prices realised at Liverpool for the 34th and 35th shipments were as follow:—154. 10s. 6d. per ton for the first-class ore, and and 86. 19s. 10d. per ton for the jigged third-class. The 36th shipment is in Liverpool, and will shortly be sold; the 37th is expected to arrive next week.

Emma shares have advanced to 3½, 3½ upon private telegraphic advice of an important discovery; for some time past a high-grade ore has been extracted, and the general prospects of the mine have been improving. Flagstaff, 3 to 3½; Last Chance, 1½ to 1¾; Tecoma, 1½ to 1¾; the official report from the newly-appointed manager will be issued in a few days, and it is understood to be of a much more favourable character than anticipated; a considerable quantity of ore has been "dumped," but its grade is not yet known. Utah, 1½ to 1¾; the directors have received very encouraging advices from Salt Lake, and have circulated the same amongst the shareholders. In another column we notice the report which has been issued. Mr. Longmaid is pushing forward the completion of the dressing-works with great vigour.

The shares of the different gold washing companies have been in good request during the week. Cedar Creek shares in particular have found many purchasers. We are informed that partial rains have fallen throughout California, and that there is now every appearance of a speedy resumption of washing. Blue Tent, 5 to 5½; Col. Tozer writes that he has put in a blast which has been very successful in throwing down a large quantity of dirt, upon which he can favourably commence washing. Cedar Creek, 2 to 2½; Mr. Ladum is pushing on the Yankee tunnel with all available means; most of his force is already concentrated there, as he already has five or six claims rigged up to commence with. Sweetland Creek, 5 to 5½; Mr. G. D. McLean writes that the enforced idleness of the last two months has really been of the utmost value, as it has enabled him to carry out some improvements, the benefit of which will be felt when work is resumed. Birdseye Creek, 3 to 3½; the Neece and West tunnel being completed to the required point and the shaft raised, the agent is making arrangements to continue the tunnel for future operations; he is quite prepared to take advantage of the first rains, and anticipates a prosperous season.

Malpaso, 1 to 1½; by advices which appear in detail in another column it will be seen that a clean up of 35 days—561 hours—washing with an average head of water of 267 in., has produced \$2000. As the total cost is about \$1500 this leaves a profit of about \$500, which, though small, establishes the fact that the gravel will pay for washing, especially when it is considered that this return is derived simply from the preliminary work of running the open cut for the sluice, and that with small head of water. The superintendent reports that he hopes if water continues to reach the main tanks by March next, when there will be a face of virgin gravel at the command of the sluice of over 200 ft. high, instead of as now about 30 ft. to 40 ft., of which one-half is old tailings. If the mine were now running with 700 or 800 inches of water the monthly returns would be increased to at least \$8000 or \$10,000, without any appreciable increase in the cost. An unfailing supply can be obtained from the River Medina, and now that the experiment this company was formed to carry out, as to the adaptability of the hydraulic process to the placers of New Grenada, has proved a complete success, no time must be lost in bringing on such a supply of water as will enable the mine to verify the opinion always entertained by all who have seen it, that it will equal the best hydraulic mines of California. Rica, ½ to ¾; everything is running smoothly here, and washing is now being carried on the main bank of gravel. A clean up is daily expected. Malabar, ½ to ¾; the superintendent hopes to be able to commence washing by March 1, and states that from the moment of starting the work they will run day and night with at least 2000 in. of water. This ample water supply places the success of the company beyond a doubt.

St. John del Rey, 150 to 190; since last advices the shafts have been sunk 2 fathoms 1 foot and 6 fathoms respectively, making the total depths 184 and 191 fathoms; and the lode is being opened out from shaft A, and it was proposed to commence to reduce the ore therefrom in the stamps on Nov. 3. Don Pedro, par to 4 prem.; the estimate for October is 6800 oitavas; the boxwork, although not equal to that obtained last month, is improving.

Almula and Tirito, ½ to ¾; the profit for September and October, after deducting London expenses, is equal to 2570L, subject to the ore realising the amount of Mr. Clemens' valuation. Pontgibaud; a dividend of 55 francs per share has been declared for the year 1872-3, of which 25 francs per share was paid on account on June 5; the payment in England will be at the rate of 14. 3s. per share free of income tax. United Mexican, ½ to ¾; the lode in the upper part of the vein in Jesus Maria has somewhat improved, and the extraction of ore for the hacienda account has increased. In the new concern the south cross-cut has traversed the lode, but little could be said of it on account of the narrowness of the cross-cut—the next advices are awaited with interest. Frontino and Bolivia; a remittance of gold valued at \$83L, is to hand, the produce for September; the loss on the month was 200L; advices appear in another column.

Van, 3½ to 3¾; Capt. Williams writes that he is still cross-cutting through the lode in the 30 west, but cannot as yet state its value. All other parts of the mine remain as last reported. We consider the quoted price of these shares quite nominal, as we cannot learn of any transactions in the shares during the week. Van Consols, 4 to 4½; the junction of the Van lode with the north lode is daily expected. The two lodes are now running nearly parallel east and west. The carbonate of barytes is now giving place to lead ore in the 60 end, and also in the winzes under the 60: 50 tons of lead ore was sold on Monday last, and 70 tons of carbonate of barytes. East Van, 24 to 25; Great West Van, 2 to 2½; this mine is opening out exceedingly well, and is certainly one of the best mines in Cardiganshire. Tankerville, 10 to 10½; an important improvement has taken place. Bog, 1½ to 1¾; the sinking of the engine-shaft is being pushed on with a good force of men, while the developments at the bottom levels are satisfactory, and are laying open good bodies of ore. Pennerley, ½ to 2; the lode at Potter's Pit still continues as rich as previously reported. The old portion of the mine remains as noted last week.

Penstruthal, 19s. 6d. to 21s. 6d. ex dividend; Capt. Teague is pushing on the erection of the stamping machinery as fast as possible, so as to commence the making of regular returns of ore.

Subjoined are the closing quotations:—

Bog, 1½ to 1¾; Carn Brea, 5s. to 5s.; Devon Great Consols, 1½ to 1½ prem.; East Van, 2½ to 3; East Lively, 10½ to 11; East Caradon, 1 to 1½; Great Laxey, 13½ to 14; Great Wheal Vor, 2½ to 3½; Perkins Beach, ½ to ¾; Pennerley, ½ to 1; Parys Mountain, ½ to ¾; Roman Gravels, 17½ to 18½; Tineroft, 2½ to 4; Tankerville, 10 to 10½; Van, 32½ to 37½; Van Consols, 3½ to 4½; West Consols, 3½ to 4½; West Chiverton, 4½ to 5½; West Esgair Lle, 3½ to 3½; West Consols, 3½ to 4½; West Chiverton, 4½ to 5½; West Esgair Lle, 3½ to 3½; West Tankerville, 2½ to 2½; Almada, ½ to ¾; Birdseye Creek, 3 to 3½; Cedar Creek, 2½ to 3; Cape Copper, 27½ to 28½; Don Pedro, par to 4 prem.; Eberhardt 2½ to 3; Emma, 3½ to 4½; Emma, 3½ to 4½; Flagstaff, 3 to 3½; Frontino and Bolivia, ½ to ¾; Malpaso, 1½ to 1¾; New Quebec, 3½ to 3½; New Pacific, 3½ to 4½; Rica, ½ to ¾; Richmond Consolidated, 5½ to 7; St. John del Rey, 150 to 190; Sweetland Creek, 5 to 5½; San Pedro, 2½ to 3; Sierra Buttes, 2½ to 3½; Utah, 1½ to 2½; Wheal Grenville, 5½ to 6½; Chontales, ½ to ¾; Tecoma, 1½ to 1½-16½; Last Chance, ½ to ¾; Colorado, 4½ to 4½; Blue Tent, 5½ to 5½.

#### IRON AND COAL COMPANIES.

DARLINGTON IRON.—The Committee of the Stock Exchange, at their meeting on Tuesday, granted a settling-day for the shares, which are also to be quoted officially. They are 8d. paid, and command a premium of 2½ and 3½. The company was formed twelve months ago to take over the business of Mr. Barningham, first started in 1859, and giving employment to nearly 2000 hands. It now takes rank as one of the largest iron-manufacturing concerns in Great Britain, having all the plant, machinery, and appliances necessary for turning out from 80,000 to 90,000 tons of finished iron per annum. The number of puddling-furnaces worked is over 200, being about one-tenth of the total number erected in the North of England, and largely in excess of those employed by Messrs. Bolcklow, Vaughan, and Co. Mr. Barningham, the founder of the concern, a hard-headed Yorkshireman from one of the dales near Richmond, is believed to have commenced life with the traditional half-crown. He made his mark at the Pendleton Ironworks, near Manchester, where he conceived the idea of re-rolling worn out rails, which had previously been looked upon as worthless. The company has recently had the carrying out of several valuable Government contracts for the

Ashantee expedition, and one of the orders now on hand is for the forgings necessary in the construction of the Bessemer steam-saloon ship, designed by Mr. Henry Bessemer, the principle being a ship (swinging) within a ship.

CARDIFF AND SWANSEA.—Warrants were sent on Dec. 1 for another interim dividend of 2s. per share, or 18 per cent. per annum. The current earnings, however, are not less than 20 or 25 per cent. The company's collieries in the Rhondda Valley are making satisfactory progress, and the output is increasing—in fact, when the new pits at Resolven part of the estate are completed the output will not be less than 1000 tons a-day.

UNITED BITUMINOUS shares have now reached rather a high premium—27s. 6d. to 30s. Dividends of 40 per cent. are confidently anticipated. The company has commenced to utilise its valuable bed of fire-clay, and bricks are being turned out at a good profit. The coal and coke continues to meet with a keen demand at highly remunerative prices. It would be difficult to point out a more promising investment. With these and other examples in view the intelligent investor should have little difficulty in making large profits without risk. The vacuum caused by the depression in Cornish mining is, in our opinion, very advantageously filled by collieries and iron companies, which pay higher dividends, and are devoid from many of the risks and disappointments inseparable from concerns started to search for tin and copper.

The following dividends were declared during November:—

Mines.	Per share.	Amount.
Penstruthal	£9 1 0	£2,500 0 0
North Hendre	0 2 6	1,500 0 0
Green Harth	0 4 0	1,280 0 0
Wheat Kitty (St. Agnes)	0 6 0	1,287 10 0
Brookwood	0 6 0	1,200 0 0
South Cadron	2 0 0	1,024 0 0
South Aurora	0 2 0	6,000 0 0
Total		£14,791 10 0

At Swansea Ticketing, on Tuesday, 1714 tons of copper ore were sold, realising 19,459L. 1s. The particulars of the sale were—Average standard for 9 per cent. produce, 98½; average produce, 15; average price per ton, 11L 7s.; quantity of fine copper, 256 tons 2 cwt. The following are the particulars of the two last sales:—

Date. Tons. Standard. Produce. Per ton. Per unit. Ore copper. Nov. 18, 1891 ..... £9 8 0 ..... 13½ ..... £19 2 2 ..... 15s. 1d. £75 5 0 Dec. 2. 1714 ..... 98 0 0 ..... 15 ..... 11 7 0 ..... 15 0 ..... 75 0 0

Compared with the last sale, the decline has been in the standard 8s., and in the price per ton of ore about 1s. 3d. On Dec. 16 there will be offered for sale 1360 tons, from Cape, Berehaven, Union, Furdson, and other mines.

At Redruth Ticketing, on Thursday, 1557 tons of copper ore were sold, realising 7617L. 16s. The particulars of the sale were—Average standard, 95L 5s.; average produce, 8; average price per ton, 4L 18s.; quantity of fine copper, 124 tons 18 cwt. The following are the particulars of the sales:—

Date. Tons. Standard. Produce. Per ton. Per unit. Ore copper. Nov. 6. 1334 ..... £9 9 0 ..... 7½ ..... £4 9 0 ..... 12s. 0d. £60 0 0 Dec. 29. 2202 ..... 98 10 0 ..... 7½ ..... 4 13 0 ..... 12 4 ..... 61 18 0 Dec. 4. 1557 ..... 95 5 0 ..... 8 ..... 4 13 0 ..... 12 3 ..... 61 5 0

Compared with the last sale, the decline has been in the standard 8s., and in the price per ton of ore about 6d.

The CREDIT FONCIER OF ENGLAND are inviting subscriptions at 97L. 10s. per 100L, for 150,000L of SIX PER CENT. DEBENTURES, being the balance of 350,000 debentures created in February last. The debentures are redeemable at 100L per debenture by half-yearly drawings commencing Dec. 1, 1874, and the whole are to be redeemed by March 1, 1880, so that, reckoning the profit on redemption at par, the return to the investor will be equal to over 7 per cent. per annum. The debentures are payable to bearer, and transferable from hand to hand without stamp. The resources of the company are so great that the most scrupulous investor could scarcely doubt the solidity of the security. The company's paid-up capital is 1,250,000L, and the reserve fund 100,000L = 1,350,000L, in addition to which there is 250,000L of uncalled capital, making 1,600,000L in all. The net profit of the company for the last two years, after providing for the interest on the debentures issued by the company, were 123,161L/ 14s. 10d. in 1871, and 194,613L/ 1s. 8d. in 1872, while the annual amount required for the payment of interest on the 350,000L debentures now issuing is only 21,000L. The lists of applications for these debentures will be closed on Monday for London, and on the day following, at noon, for the country. The prospectus will be found in another column.

Messrs. Holderness, Nott, and Co. are inviting subscriptions for 10,000 shares of 5L each, being one-half of the nominal capital of the WERNPISTILL COLLIERY COMPANY. The object of the company is to purchase for 32,000L, and develop the property of the same name, situated near Britonferry, Glamorganshire, consisting of about 700 acres of very superior coal, together with a large quantity of fire-clay and ironstone. The colliery which is taken over as

going concern, has been in profitable working for some years, and on the property are all the appliances for getting coal, including tramways, wagons, machinery, horses, &c. also mills, engines, kilns, buildings and sheds for the manufacture of fire-bricks. The estate is held under a lease from the Earl of Jersey for 60 years from Dec. 1, 1853, at 4d. per ton on coal, 6d. per ton on ironstone, and 4d. per ton on fire-clay. The present openings are within a few yards of Britonferry Docks, enabling coal to be shipped to all parts of the world at a minimum price for transport. There are four seams of coal estimated to yield a daily output of 300 tons, which assuming only 2s. a ton profit (the present profit 6s.) for 290 working days per annum, shows a total return to the company of £7800 per annum, but on the improvements recommended by Messrs. Sheldish and Robinson being carried into effect the output will be increased to 400 tons daily, which, at the above profit of 2s. per ton, shows an annual net profit of 10,400L a year, exclusive of the profit on fire-bricks and ironstone. Messrs. Sheldish and Robinson report as to one portion of the property that "the whole of the acreage to the east of the Pantygwn fault is unworked. The acreage of this part of the property we estimate at about 400 acres, of which about one-half is to the rise of the water level, and one-half to the dip. The amount of coal under this we estimate to be at least 4,000,000 tons, after making a liberal deduction for pillars, barriers, crop coal, &c. This would, therefore, furnish an output of 400 tons a day for the remainder of the lease, and is on this portion of the property chiefly that we advise capital being expended." The brickworks are in full operation. It is estimated that the profits will amount at the present price of coal to 35,000L per annum, equal to 70 per cent. The prospectus will be found in another column.

The ST. LAWRENCE, VICTORIA, AND VALENTINE AMALGAMATED MINING COMPANY, which was formed some time since with a capital of 12,000L, in shares of 2L each, is inviting subscriptions for 1000 of such shares at par, the amount being payable by instalments extending over six months. The sets are favourably situated at Brynford, in Flintshire, and within two miles of smelting works. The amalgamated sets form a very valuable mining property of more than 100 acres, the two first named being held under the Marquis of Westminster, for a term of about 22 years, at a royalty of 20s. per ton, the latter for the same period from Mr. Richard Williams, of Glyn Arthur, near Denbigh, at a royalty of 1½—there is no dead rent whatever. There are many well-known and celebrated localities in this property, the principal of which form a junction at the southern portion of the sett, as shown in the plan, where also the Hundred Pound lode falls in. Since the formations of the company the directors have been energetically developing the property, and the time having now arrived when it has become necessary to erect crushing machinery and dressing floors, they have resolved to issue 1000 shares (being part of the capital) to enable them to meet the additional outlay, and to carry the work of the mine vigorously. The mines are worked in the most economical manner, as no machinery is required for pumping, the whole of the water being carried away by swallow or natural cavities in the rock. The manager is so confident in the ultimate success of the mines that from the commencement of the operations he has taken, and will desire to take, his salary in paid-up shares. Capts. John Pryor and Wm. Wesley report very favourably upon the present prospects. The prospectus will be found in another column.

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Atlantic and Great Western Railroad Leased Lines Rental Trust Bonds are 87½ to 88½, and the New Issue 80½ to 81½. United States Rolling Stock is 20½ to 21.

MAMMOTH COPPEROPOLIS OF UTAH.—We understand that the action brought by Mr. Francis Fowler, M.Inst.C.E., against the above company for breach of contract, &c., has been settled at the last moment without going into Court by the company paying that gentleman 800L.

#### ZINC AND LEAD ORES.

I BUY at the HIGHEST PRICES:—  
LEAD ORES.—LEAD-SILVER ORES.—SILVER-LEAD ORES.  
ZINC AND LEAD ORES MIXED TOGETHER.  
SILVER-LEAD, BULLION, HARD LEAD, &c.  
SULPHATE OF LEAD, ASHES, SLAGS, &c.

Particulars by letter.

ARMAND FALLIZE, Ingénieur, à Liège (Belgium).

#### CAPPER PASS AND SON, BRISTOL,

ARE PURCHASERS OF

ANTIMONIAL LEAD, HARD LEAD, LEAD MATTE, LEAD SLAGS, SULPHATE OF LEAD, LEAD ASHES, COPPER SLAGS, COPPER RE-GULUS, TIN ASHES, ZINC ASHES, SPelter DROSS, HARD SPelter and MIXED METALS, DROSS or REFUSE containing COPPER, LEAD TIN, or ANTIMONY.

#### MR. JOHN HENRY POOLE,

MINERAL AGENT,

## NOTICES TO CORRESPONDENTS.

\*\* Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be filed on receipt: it then forms an accumulating useful work of reference.

PRACTICAL MINING ENGINEERING—"A. H." (St. Austell).—We know no books likely to suit one who "knows nothing about the subject either in theory or practice." Ramsay's treatise on Weale's series is a useful little work on mineralogy. Experience is said to teach wisdom to a certain class of persons, but it may be hoped that "A. H." is not of the number. The kind of instruction usually received by a student training as a military engineer would suffice for the scientific portion of a mining engineer's education. There are no books, nor would they be useful, to explain the opening and working of mines. "A. H." would do well before going further to study for a few terms at the Royal School of Mines.

BLASTING.—We shall be glad to receive the communication. Articles on practical subjects are always acceptable.

MINERAL STATISTICS OF THE UNITED KINGDOM—"E. L." (Manchester).—The statistics for 1872 have not yet been published. It is rumoured that changes will be made in the office which will effectually prevent such delay in future. For all business purposes such statistics twelve months old are practically worthless.

HALL'S GULCH MINING COMPANY.—We are obliged for the letter from Fairplay, Colorado, and shall use the information when an opportunity offers.

RECEIVED—"C. S. R." (Colorado)—"E. H." (Sydney)—"Reader" (Nevada)—"T. B. S." (Glasgow)—"W. B."—"One who has suffered by following Advice"—"A Constant Reader" (Paris)—"An Original Shareholder"—F. Wallis: Too late.

SHARE DEALING.—We never interfere in the sale or purchase of shares; neither do we recommend any particular mine for investment or speculation; or broker through whom business should be transacted. The addresses of most of the latter appear in our advertising columns.

AMERICAN SUBSCRIBERS.—In reply to several enquiries, it may be stated that subscribers in the United States can be supplied with the *Mining Journal*, post free, at the price of 88 gold per annum, payable in advance, by remitting to Mr. D. Van Nostrand, publisher, and importer of scientific books, &c., Murray street, New York; or, direct to our Office, 26, Fleet-street, E.C.

RE-POSTED "MINING JOURNALS."—Many of our subscribers who re-post the *Mining Journal* to their friends subject them to a fine of 4d. per copy on delivery through inattention to the Post-office regulations. If the halfpenny adhesive stamp be affixed partly on the wrapper and partly on the paper the packet is considered "closed against inspection," and surcharged accordingly. If the newspaper cannot be slipped out of the wrapper if required for inspection, the newspaper will be lost.

## THE MINING JOURNAL, Railway and Commercial Gazette.

LONDON, DECEMBER 6, 1873.

### THE PRICE OF COAL, AND ITS CAUSES, &c.

Nothing can be more opposite to each other than the condition of the coal trade in the first and last months of the year 1873, and we are glad to find that our own anticipations with regard to the present winter, when we wrote some time since that fuel would be cheaper in the depth of winter than it was in the dog days, have been more than verified. Such a view was opposed to the opinion of many of those who professed to be acquainted with the subject, but who had not studied the habits of our miners or the extensive development of the mineral fields of the Continent, which has been going on for some considerable time past. Great, however, as has been the difference between the state of things in January and December of the present year, still the change during the past six or seven weeks has been about the most remarkable in the history of the coal trade of the kingdom. This cannot be attributed to the many new pits being opened out, for most of those that will before so very long make a most material difference to consumers and colliery owners are now in that embryo state which adds but little to our aggregate production. In the course of a couple of years, however, they will tell a very different tale, and the addition of some millions of tons annually to our yield must bring down the price of coal immensely. Yet to find that coal at the present time is from 7s. to 8s. per ton less than it was in the summer is certainly a great anomaly, and to the uninitiated must be bewildering and incomprehensible. But to our thinking the reasons for such a state of things are clear and obvious, and when we have stated them their accuracy, we believe, will be generally acknowledged. A variety of circumstances appear to have combined to lead to a reduction in the price of coal during the last two or three months. Not the least important of these being the fact that the miners work with greater regularity in the winter than they do in the summer. If we take the present time we find that there are very few attractions sufficient to draw the men away from their work for a day or two in the week. But such is not the case in the fine and genial summer weather. Then every inducement is held out to the men to neglect their work for one or two days a week, or even more. Sporting publicans look upon the collier as fair game, and for his special delectation pigeon shooting, foot racing, rabbit coursing, and other matches are got up. The miners attend in thousands, back the men who are matched, drink large quantities of bad beer or fiery spirits, from which they are very often only recovered sufficiently to resume work for the week on Wednesday.

This is no overdrawn picture. If we take the Midland coal field at its nearest point to the metropolis, Nottingham, and from thence proceed onwards in Derbyshire, on almost any Monday in the summer, we shall find hundreds of men attending some sporting affair or other. Should we get as far as Sheffield we shall find a great many of the collieries deserted, or in some instances not a third of the hands at work; for if the coal-getter goes away his hurrier perforce must do the same, for the work of one depends upon the service of the other. Sheffield, it may be said, has decoy-grounds, to which as many as 8000 to 10,000 colliery operatives are often drawn together in a day, and, as the men have plenty of money, the sports are very often extended to two days, in which case a great many of those who attend only work three days in the week. Proceeding still further north, we find a similar state of things at Barnsley, Normanton, and some parts of the Leeds district. Going thence to Durham and Newcastle we find the moors and sporting grounds covered with the coal-y element; for your North Country collier delights in racing of every description, bowling, quoits, and, of course, could not miss a race on the dark waters of the Tyne. The Scotch miners do not appear to be much better than their southern brethren, for Mr. MOORE, the Government Inspector, in his last report, remarks that the men do not work so regularly now they have such high wages as they did previously, and in instances cases where some of the colliers in his district played from 50 to 102 days during the year. Here, then, we believe we have touched upon one of the principal causes which led to the scarcity, and consequent very high price, of coal during the past summer, a time when a collier in eight hours could earn from 10s. to 20s. This is part of what we may call the great coal question which appears to have been entirely overlooked, and for which we believe a remedy could easily be found. Magistrates give licences to places where miners are attracted to spend one or two days a week for the sole benefit of the publican, or some sporting character of doubtful reputation who desires to make money by any means he can. Here is a grand field for the Anti-Coal Ring Association of the metropolis to work in. If, instead of running amuck at the coal merchants, who are comparatively powerless in keeping up prices, as they have to compete with colliery owners who have offices in London, they agitated for some measure compelling a miner in good health to work 48 hours per week they would do some good to the miners themselves and greatly benefit consumers. Or they might be able to induce the miners to make up a broken week to a full one. If the association accomplishes what we have indicated, we should very soon find that there would be no complaints as to any scarcity of coal, or of its very high price. Or the same object could probably be attained were the colliery proprietors to put in full force the provisions of the Masters' and Servants' Act, but it might probably be found at times opposed to their interest to do so, seeing that the limitation of the output is a sure means of keeping prices up.

As to the great decline in the charge for coal of every description, another reason in addition to that we have named is the decrease in our exports, although not so particularly large, yet sufficiently so to show that the decrease will be more marked than it now is,

seeing that in many parts of Europe capitalists are engaged in developing the mineral resources of various districts where coal and ironstone are known to abound. Germany for many years has been our best customer, but is so no longer. This is shown unmistakably, for if we take the best shipping month of the year, August, 1873, we find the tonnage of coal exported to that country was 192,992 tons, against 264,597 tons for the same month of 1872. But Germany evidently intends to be entirely independent of us, for she is now fast opening out her own vast mineral resources, for although the Saarbruck field is now yielding only about 500,000 tons a month, yet it is capable of doing, perhaps, more than four times as much, for the area of the field is much larger than the English Midland district extending from Nottingham to Leeds, and which last year gave upwards of 25,000,000 tons. Russia, too, evidently does not appear desirous of being such a large consumer of our coal as she has been, more especially as some of her finest ports are closed during half the year. The exports of late have fallen off considerably, for we find that whilst in the busy month of August last there was sent to that vast country 66,087 tons, the quantity in August, 1872, was 124,816 tons. A great many collieries are now being opened out in Russia, where the mineral deposits are very extensive, the coal field north of the Sea of Azof alone having an area of about 11,000 square miles. So far as Russia is concerned, then, for some months to come no coal whatever can be exported to most of her ports. We have endeavoured to show the causes of the late reduction in the price of coal, as well as the principal reason for the limitation of the production in summer, and the consequent high rate it was maintained at, as well as showing how the latter might be averted. And, as illustrating our argument by a prediction, we may say that it is more than likely that the price of coal will increase during Christmas, or perhaps shortly before it, when stocks will be required, and almost every colliery in the kingdom will be standing for some days, if not for close upon a week.

### NORTH OF ENGLAND METALLURGY.

The reactionary movement which commenced in the pig-iron trade of the North of England some six months ago has not yet run its course, although No. 3 has fallen as low as 85s. per ton. The prevailing impression is that it will touch 70s., or at least 75s., before a condition of stability and firmness has been attained. All the signs of the times point to the prospect of a period of depression, not perhaps of a serious nature, but widely ramified, and influencing all the branches of the trade. The demand for pig-iron has gradually declined since October last, when a temporary activity was induced by the requirements of German purchasers in view of the operation of the new tariff which then came into operation in that country; but since then there has been nothing to stimulate demand; on the contrary, everything has been against it. The shipping season over, the money market tighter than it has been for years, the commercial panic in America, the steady increase of production in the Cleveland district—all these, and other causes less apparent, have borne down the iron market, in spite of all the artificial resources of the "bulls" and the resistance of the stronger holders. The returns for the present month will complete the year, and then we shall be in a position to judge with more fairness and accuracy the future prospects of the trade. Meanwhile, makers are accumulating considerable stocks, and rather than go down on doing this some of them are likely to blow out or damp down their furnaces. The partial depression that has overtaken Cleveland is not the exception, it extends to all other centres of the iron trade, both at home and abroad, and is an almost inevitable consequence of the abnormal condition of the iron trade during the past two years. That condition was too unnatural to last for any length of time. It arose primarily from the Franco-Prussian war, the close of which led to a general revival of industry on the Continent, and an extraordinary demand for all kinds of British produce. But that cause is now no longer operative, and its results must also disappear to a greater or less extent. Metallurgical industry is now settling down to something like its former conditions, and if we fail, as many think we shall, to reach the level of three years ago, we shall, at all events, attain a condition of things much safer, because much more natural and ordinary, than that which has lately prevailed.

A great deal is said and written about the unsatisfactory condition of the finished iron trade. It is perfectly true that that department of our staple industry is to a large extent out of joint, but it is much less so now than it was six months ago. The materials required for the manufacture of finished iron are much cheaper now than they were some time back. It was the exceptionally high price of pig-iron that led to the depression of malleable iron makers. Consumers of plates and rails would not enter the market when these commodities were quoted at 12d. to 15d., but now that pig-iron has fallen from 115s. to 85s. it has become possible to produce both rails and plates at a much cheaper rate, and additional orders are, as a consequence, likely to come in. There is much necessity for an access of animation in the finished branches of the trade. There are still something like 360 puddling-furnaces laid off, and as each puddling-furnace employs about ten men, it follows that if these furnaces were at work there would be employment for over 3000 additional ironworkers. Many of the men who were formerly employed at the works now laid idle have sought employment in collieries and mines; while others have gone into other departments of metallurgical industry. In the course of a month or so it is likely that many new orders will be given out on account of home railway extensions. One of the most interesting features of the North of England iron trade at the present time is the active competition encountered from Wales, and Welsh manufacturers have generally proved successful rivals. They have recently secured several large orders which, but for their lower quotations, would have come to the North of England. Cleveland makers are, however, hopeful that the reduction in the cost of raw and crude materials will soon place them in a more favourable position, and at least enable them to hold their own. The Darlington Iron Company is now working with a greatly reduced staff. The North Yorkshire Ironworks are still idle. At Walker no steps have been taken to re-commence the puddling department. It cannot be said of any firm that they are exceptionally busy, whereas it is true of some that they are working from hand to mouth, and may be compelled almost any day to discontinue operations.

It is generally when trade is slack, and they have little else to do, that manufacturers are most ready to give their attention to plans and processes claiming to improve or cheapen the cost of manufacture. Much energy in this direction is now apparent throughout the Cleveland district. Mr. DANKS's rotary puddling-furnace necessarily takes pre-eminence of all other recent improvements in metallurgy, and at the Carlton Works and the works of the Erimus Iron Company the results of this system are now being carefully tested, although no results sufficiently accurate and reliable for publication have yet been obtained. At the Tudhoe Works of the Weardale Iron Company Mr. CASSON-DORMOY's furnace is being tried for the first time in the North of England. It is found that this furnace will puddle about 4 tons of pigs per shift, with a consumption of about 14 cwt. of coal to the ton. Mr. CASSON-DORMOY's furnace is now worked at the Earl of DUDLEY's works, and at the Darlaston Works, in connection with Mr. GRIFFITH's puddling-machine; and at the Tudhoe Works the results so far obtained are regarded as satisfactory. Mr. SPENCER, of the West Hartlepool Rolling-Mills, does not seem to have overcome the difficulties in the way of the adoption of his rotary puddling-machine—at all events, we do not hear of its making any headway; although it has now been before the world for about two years, it has not got beyond the experimental stages of progress. Mr. THOMAS, of the Acklam Refinery, Middlesbrough, is a patentee of a new form of puddling-furnace, which is exceedingly ingenious in design, but of which we are unable to say anything more in the absence of reliable results. The patentee is now making arrangements for having his furnace tested on a large and complete scale on a site acquired for that purpose at Eston, near Middlesbrough. An allusion to recent improvements in the finished iron trade of the North would not be complete if it failed to include Messrs. GREENER and ELLIS's fettling, or dry oxide bottoms, for mill furnaces, which is being adopted by several large and well-known firms in the North. It has hitherto been the custom to fettle

with sand, which caused the rich oxide of the iron to be almost valueless. The "flue cinder" obtained from sand fettling has been sold for blast-furnace purposes as low as 1s. 6d. per ton, and the maximum price at the present time is 6s. per ton. But the new fettling nourishes and enriches the iron instead of wasting and depreciating it, and its use has been proved to effect a saving of not less than 10s. to 12s. per ton. If the ironmasters of Cleveland could only be induced to throw aside some of their old prejudices this new fettling would come to be largely and generally adopted.

The tendency of the coal and coke trade exercises a most important influence, both direct and reflex, upon the prospects of all branches brought into operation have already exercised a sensible effect in reducing the cost and increasing the supply of these commodities. At the present time there is not only an abundant supply of coal, but at some collieries stocks are being accumulated, although it is probable that they will be reduced very materially during the new year's holidays, when the colliers take a week for recreative purposes. Great complaints are made in South Durham of a scarcity of wagons. The demand for coal and coke has increased so rapidly that the railway company has not kept pace with it, so far as the supply of wagons is concerned. It is only a few years since now, but children wagons were employed in the Northern coal trade, but the exigencies of metallurgical industry led to the substitution of trucks holding from 6 to 9 tons each. Of these trucks there are now some 10,000 on the Darlington and Stockton Railway alone, apart from the rolling-stock owned by private traders, and yet it is found that the supply is far from adequate to the requirements of the trade. Coalowners declare that they could send out a great deal more coal if a better and more regular supply of trucks were forthcoming, and manufacturers declare that their operations are hampered by irregular deliveries, arising from the same cause. The pinch is most keenly felt about the beginning of the week, the majority of the ironworks having a large number of wagons laid up over Saturday with their Sunday supply. We understand, however, that the railway company propose to take immediate steps to remove this cause of complaint. This leads to the remark that the ironmasters of Cleveland, and others interested in the trade of the district, have formed a Freighters' Association, with the view of taking steps to procure the redress of any grievance for which the railway company are responsible. At the present time Cleveland is under the dominion of a railway monopoly. The North Eastern Railway Company have no rival in the district, and it is almost true to remark that monopoly is not so healthful as competition, nor so likely to meet the interests and requirements of trade. The North Eastern Railway have long been blamed for disregarding the wishes and wants of freighters on Tees-side; but they have recently exhibited greater consideration in the matter. They have spent one 130,000l. in giving new docks to Middlesbrough; they are about to expend another large sum in helping Stockton to similar facilities; they are now proposing to connect both banks of the Tees by a tunnel, opposite to Middlesbrough; they have done all, or nearly all, that was required of them in the way of constructing branch lines for the purposes of trade; and they have otherwise assisted to promote the resources of the district. There is a bare possibility, therefore, that before the Freighters' Association is fairly established the necessity for it will have passed away.

### RAILWAY IRON ABROAD.

One of the most striking signs of the times in connection with the foreign and colonial demand for our railway iron has been the extraordinary collapse in the American consumption. In October, 1871, this consumption was represented by an export of 52,171 tons; in October, 1872, the export had sunk, however, to 31,367 tons; and in October, 1873, the corresponding total was quite insignificant—only 8044 tons. Again, in the first ten months of 1871 we sent the Americans 441,709 tons of our railway iron, while in the corresponding period of 1872 our exports in the same direction did not exceed 410,010 tons, and in the corresponding period of 1873 even receded to 160,036 tons. It is doubtful whether the full effects of the financial crisis which still afflicts the United States were felt in October, and we should not be surprised to see a further contraction in the exports for November and December. In that case the exports of our railway iron to the United States for the whole of 1873 will not improbably not exceed 170,000 tons, or about one-third the corresponding total attained in 1871. The revulsion is certainly extraordinary, but American commerce is always more or less feverish and capricious. The Americans never appear to exactly appreciate or understand the condition, prospects, and resources of their own country; and the balance of interest is also, probably, against them. England is the most wealthy country in the world, because almost all other nations pay it tribute in the shape of interest on loans and dividends on shares, to say nothing of the profits realised on trading operations. In the United States a vast number of immigrants is continually pouring into the Republic from the world, but they do not bring much capital with them; in fact, they bring scarcely any at all. The result is that in their attempts to develop their undoubtedly great natural resources the Americans have to import capital freely from Europe, and especially from Great Britain; and the effect of this is that, instead of receiving interest like the English, the Americans have to pay it, and the profits of American enterprises are drained away, to no small extent, to Europe. However, in spite of all this—in spite, too, of the desolating war of 1861-5—the Americans were making good progress as a nation, and wealth was beginning to accumulate (as it is, probably, even now accumulating) in the older and more settled States, with something of a railway mania set in. The scrupulous good faith with which the United States Treasury met its national obligations in spite of all the difficulties arising out of the civil war, did much to restore, consolidate, and strengthen American credit in Europe, and the result was the establishment of financial houses for the negotiation of American railroad loans in Great Britain, France, Holland, &c. The first issues were made with ease, but the European markets were soon glutted with American railroad bonds of more or less doubtful repute; and the upshot of the whole matter has been that American commitments having become in excess of American resources, a disastrous panic has followed, of which we have not yet witnessed, probably, the full development and the ultimate consequences. For the present generation, in all likelihood, there will not be another American railroad bond mania either on this or the other side of the Atlantic. The principal purveyors of American railroad bonds—such as FISK and HATCH, JAY COOKE and CO., and HENRY CLEWS and CO.—have collapsed, and with them their clientele must have collapsed also. Another generation may take to American railroad bonds, but the present is not very likely to do so. Hence there appears to be little probability of a revival in the American demand for our railway iron for many months to come, more especially as the Americans are making strenuous efforts to develop a metallurgical industry of their own.

While the American demand for rails and their accessories has thus partially collapsed, it is rather cheering to find that the younger elements which we have founded at the Antipodes are beginning to develop a larger and larger extent of railway, and to take, by consequence, larger and larger quantities of our railway iron. Thus, in October, 1871, we sent the Australians 407 tons of our railway iron; in October, 1872, the total had risen to 1964 tons; and in October, 1873, it had further expanded to 4442 tons. Again, in the first ten months of 1871 our exports of railway iron to Australia and New Zealand amounted to 12,014 tons; in the first ten months of 1872 they rose to 19,098 tons; and in the first ten months of 1873 they were even little more—21,661 tons. It may not be generally known that the Australian settlements have ranked sixth this year among our foreign and colonial iron-consuming customers. The United States have, notwithstanding all opposing circumstances, still ranked first, with 160,036 tons. Russia has occupied the second place, as a consumer of 148,372 tons; British America has ranked third, with 32,231 tons; Sweden and Norway fourth, with 39,487 tons; Germany fifth, with 27,645 tons; and Australia and New Zealand sixth, with 21,661 tons. In spite of the immense distance which has to be overcome by our agents to the Antipodes, emigration to Australia appears to be on the increase.

more increasing; and the credit of the various Australian Governments being generally good, there will, doubtless, be a continued prosecution of Australian railways.

**MINERS' ASSOCIATION OF CORNWALL AND DEVON.**—The prizes offered some time since by Mr. J. Arthur Phillips, F.C.S., for the best essay on the Elvan Courses of Cornwall have been awarded—the first to Mr. A. K. Barnett, of Penzance, formerly of the Carharick class; and the second to Mr. W. H. Argall, of the Breage class. The judges wrote as follows:—“We, the undersigned, having carefully perused and considered the papers on the Elvans submitted to us, and are of opinion that the memoir on Mr. Barnett stands first for the prize. At the same time we must express our commendation of the zeal and industry which have been brought to bear by Mr. Argall in completing so full a descriptive list of the Elvan courses through a very extensive district.”—Signed by Mr. W. W. Smyth, F.R.S., and Mr. Robert Hunt, F.R.S.

**SELF-ACTING MINERAL DRESSING MACHINERY.**—Reference has frequently been made in the *Mining Journal* to the apparatus manufactured by the Patent Self-Acting Mineral Dressing Machine Company, and there has now been forwarded to our office some exceedingly satisfactory samples of the work done by the dressing machines at the Stoncroft and Greyside Mines, where they have just been erected, and give entire satisfaction. The testimonial received have been most flattering; Mr. T. Viner Clarke, for example, writing that in the treatment of a most difficult ore—that of the Rossa Mine, Sardinia—the separation of the lead from the blende has been most complete, and Mr. Montague Beale, managing director of the Cagliari Company, writes:—“I consider this company is much indebted to you for the success you have achieved at so small cost. It may interest you to know, from my experience in several of the British possessions, including the whole of the Australian colonies, that my opinion is I have never seen any dressing machinery that can so efficiently, and at so small cost, dress and separate metallic ores, however close the mechanical mixture may be, as yours.”

**HOOPS, SHEETS, AND PLATES.**—The exports of hoops, sheets, and plates from the United Kingdom in October amounted to 15,823 tons, as compared with 19,661 tons in October, 1872, and 19,199 tons in October, 1871. The exports of hoops, sheets, and plates to the United States fell off very sharply in October, but they presented some improvement as regards Russia. The aggregate exports in the first ten months of this year were 172,271 tons, as compared with 172,972 tons in the corresponding period of 1872, and 165,363 tons in the corresponding period of 1871. The exports of our hoops, sheets, and plates to the United States have been progressively declining during the last two years. The exports have increased this year to Russia, Germany, Holland, France, and Australia; but they have decreased to Spain, the United States, British America, and British India. The value of the hoops, sheets, and plates exported in October was 312,862L, as compared with 375,650L in October, 1872, and 239,920L in October, 1871; and in the ten months ending Oct. 31, this year, 3,158,940L, as compared with 2,780,554L in the corresponding period of 1872, and 1,947,952L in the corresponding period of 1871.

**TIN FIELDS OF QUEENSLAND.**—In the Supplement to this day's Journal we publish an important and interesting communication from a thoroughly reliable local Queensland correspondent, showing the aggregate production of tin as estimated from the Customs and railway returns. The quantity is put down at 150 tons of tin a month, and during July and August, the latest months for which returns are obtainable, the export of ingot tin amounted to 42 tons, and it is found that the more the ground is opened up the richer and more extensive the prospects become. A large number of lodes have been discovered, but they have not yet received any attention. The supply of coal is enormous, so that smelting will soon be carried on at the tin workings. The Queensland tin streamers are astonished at the extreme poverty of what Cornishmen regard as good tin ore.

**THE COAL FIELDS OF VICTORIA.**—The report of Mr. JOHN MACKENZIE, F.G.S., the Government Examiner of Coal Fields for New South Wales, has reported unfavourably as to the commercial value of the coal seams in the districts he was requested by the Victorian Minister for Mines to examine and report upon. After giving the details of his examination, with the sections of the localities in which he saw coal, he observes that having given the whole subject his very best consideration he concludes, “That it is useless to expend any further sums of money in searching for payable seams of coal in the Bass, Griffith's Point, Western Port, Cape Patterson, Strelzki, or Stockyard Creek districts; that the Kileunda, Blue Mountain, or Strelzki seam of coal might be sought for and opened out in the ranges east and north of Messrs. McCall and Co.'s lease at Strelzki, proving it at intervals of a few miles apart to determine the thickness; and that the country might be examined between the above-mentioned ranges and the River La Trobe, or north-easterly and north-westerly edge of the coal basin, to see whether the Rock or Queen veins, or their equivalents, rise to the surface again in this direction, and are of any value. Such an exploration can only be properly and efficiently carried out by the Mining Department, and under a responsible person. The very excellent and valuable geological maps prepared by the late Director-General of the Geological Survey, and the more recent maps published by the present Secretary for Mines, Mr. R. Brough Smyth, F.G.S., are proofs beyond dispute that by this means the work will be done in the best and most efficient manner possible.”

**AMERICAN MINING.**—A correspondent, writing from Michigan (Nov. 10), says:—“The panic caused by Jay Cooke and Co. is awfully felt here on the Lakes, not only in copper mining but in iron as well. About 2000 men will likely be thrown out of work in the iron mines of Marquette district just now, and the balance will have to work for a greatly reduced pay, and perhaps in many cases pay be put off until spring. And should I say that similar results will follow in the copper mines on the Lakes, I fear I should not be wrong. This, however, will not depreciate the value of the mines, and I hope some day to see new life infused into them again.”

#### REPORT FROM LANCASHIRE AND CHESHIRE.

**Dec. 4.**—No announcement of a reduction in the price of coal has yet been made in this district, but in all departments rates for fuel are much easier, and there is actually beginning to be some amount of competition for orders, especially amongst the smaller colliery proprietors. The reduction in coal, however, is not having the effect which was predicted by many who thought that the high rates charged for this commodity were the sole cause of stagnation in other departments of industry. It seems that dear coal simply meant prosperous trade generally, though it may be that the exorbitant prices which prevailed for some little time in the height of the great demand reduced the profits of other manufacturers. In the face, however, of lower prices for slack we have a general dearth of trade, and no signs of improvement, in the chemical and salt branches, while in iron it has in some cases had to be discussed whether it would be more profitable to close works or to go on at a sensible loss. In the manufactured iron trade dear labour, dear raw material, and restricted hours of labour have been quite as much to blame in producing the present state of affairs as dear coal. Steel manufacturers are busy, and there is a moderate amount of activity amongst shipbuilders, but in other departments of trade things are very bad, and there is no sign of their mending.

The usual monthly meeting of the Lancashire and Cheshire Coal Association was held in Manchester, on Tuesday, Mr. W. Bryham, president, in the chair. After the transaction of the usual business Mr. Peace, the secretary, introduced Mr. Applegarth, the English agent for M. M. Demayrouze, the patentees of the Aerophore, the machine to which reference was made in your columns last week. Mr. Applegarth gave some explanation of the working of the invention, in which great interest was displayed by the gentlemen present, many of whom promised to attend the experiments about to be commenced. Last night Mr. Applegarth met a number of under-

ground managers at the Victoria Hotel, Wigan, with a view to making arrangements for testing the apparatus. As these will be the first experiments that have taken place in England, great interest is manifested in them. They will probably extend over some days, and as the suggestion at present most in favour is that a course should be taken here similar to that adopted on the Continent, that the dangerous portion of the experiments—the entering of foul atmospheres—should take place in a room above ground, and that an opportunity should be afforded in the mine of showing with what ease a man can undertake work who is breathing the air provided by means of this invention. Many colliery proprietors have offered Mr. Applegarth every facility for his experiments, and I hear that they will be witnessed by many gentlemen from distant coal fields.

The adjourned inquest concerning the explosion at Messrs. Turner's, Wigan Colliery has been resumed this morning.

#### REPORT FROM CORNWALL.

**Dec. 4.**—The last month of the year is rarely an exciting one in mining matters, nor is this December likely to be any exception to the rule. We regret to state that since prices hardened they have gone back again, and a fall in the standard is now contemplated. There are encouraging rumours, however, that the price of coals is likely to go down, as much as 10s. per ton is named. This is consequent on the falling off in the production of iron, and the consequent release of a quantity of the coal that would have been employed for that purpose. By the way, how is it, seeing that iron has gone down so much, that the founders have not revised and reduced their price lists accordingly?

Cornish engineers do not know everything, any more than their brethren in other parts of the kingdom; but that they know a great deal is practically made evident every now and then by the esteem in which the Cornish pumping-engine is held. Thirty years ago Messrs. Loam, of Liskeard, erected one on a coal mine at Preston Grange, near Prestopans. It has gone continuously ever since, with the exception of a few trifling repairs made last year. Now Messrs. Loam are engaged in supplying the machinery and pitwork to a new pit in the same locality.

The council of the Miners' Association have decided upon offering extra prizes for competition among members of the eight classes working in Cornwall under their auspices for papers on mechanics and the principles of mining, believing that many mine accidents are caused by ignorance of the laws of mechanics and the strength of materials. Mr. W. H. Argall, a member of the Breage class, has been awarded the second prize offered by Mr. J. A. Phillips, F.C.S., for a collection and descriptive catalogue of the Elvans of Cornwall. Other members of the class have also met with great success.

During the past few days Blake's stone-crushing machine, which Capt. Teague purchased at the meeting of the Bath and West of England Society at Plymouth, has been working at Tincroft Mine with very considerable success. It does a prodigious amount of work in a remarkably short space of time; it crushes with the greatest ease the hardest stone, and there is no doubt that it will save a vast amount of labour, and therefore money. Fifty of these machines might be used at once in the county with advantage.

The Cornwall Railway is a most unlucky line. The traffic for some time past has been steadily increasing, and it was hoped, with what appeared to be a good show of reason, that it would ere this have turned the corner, and proved itself capable of meeting the comparatively small margin of preferential and debenture charges. But first the price of coal, and of materials rise, then there is an advance in labour, and not every few months brings with it its incident, damaging to property, if not destructive of life. This week there has happened the most extensive and complete smash ever recorded in the history of the company. Two very heavy goods trains, one drawn by two engines and the other by one, met at full speed in a cut between St. Germans and Menhead. At a moment the cutting was filled with the debris of a dozen trucks, some of which actually leapt on and over the engines, whilst a score of others were more or less injured, and the trains were completely blocked for many hours. The drivers and stokers of the engines were severely injured, and five of them now lie in the hospital at Plymouth. The catastrophe took place in complete darkness, between five and six o'clock in the morning, and is traced to the guard of the up goods train while waiting at Menhead, misunderstanding an order which was given to a down train to proceed to refer to him. The damage may amount to some thousands of pounds. The up train was laden with china-clay. Of course until the line was clear all goods traffic had to be suspended.

A very curious case has been heard at the Penzance County Court. A couple of St. Just miners, who had been working on tribute in what is now the Boscombe Downs Tin and Copper Mine, sued the association to which it belongs for 29,75. Their case was that in 1772 they took a tribute pitch in the 110 fathoms level at 15s. in 17. Before their stuff was sent to “grass” the managers decided to roll off that part of the mine. Soon after this the property changed hands, and the new adventurers forked the mine, and this stuff was brought to surface. Mr. Cornish contended that the men were entitled to their claim, submitting that the ore was the property of the men till they finished their contract by bringing up their stuff, and also contending that the company who sold the tin were liable to pay the miners. Mr. Rogers, in resisting the claim for the association, argued that the present adventurers were not liable to pay, as they had entered on the mine believing that all liabilities had been met by the old adventurers. He said he could also bring evidence—by the captain—that as a fact, this was not the ore the plaintiffs broke, but was broken 20 years ago. The Judge interrupted the argument, as the action was one of “tort,” and the claim being above 20.—the extent of his jurisdiction in “tort”—he could not hear the case. Mr. Cornish thereupon with new his summons. At the same time the Judge (Mr. Bere) made some rather caustic remarks upon Cornish witnesses and juries; towards the latter he was not very kindly inclined. He was very much struck with the remarks of Mr. W. H. Argall, who, in writing of Cornish witnesses and juries, said:—“That the witnesses have not stickled now and then to fasten their evidence, rather for serving a turn, than for manifesting a truth; and that the jurors' verdict hath savoured more of affection than reason.” What was written more than 200 years ago was still, the Judge thought, very true and very applicable in the present day. He should like the oath of the juror to be altered from—“and a true verdict give according to the evidence,” to “and a true verdict give as between the parties concerned.”

#### REPORT FROM SCOTLAND.

**Dec. 3.**—The Warrant Market continued dull all last week, and the price gradually fell from 10s. on Tuesday until 10s. 6d. was accepted on Friday. This week the tendency has been towards greater steadiness. On Monday business was done from 10s. 6d. to 10s. 6d., closing at 10s. 6d.; and yesterday from 10s. 9d. to 10s. 9d., closing with sellers at 10s. To-day there has been more animation in the market, and numerous transactions took place from 10s. to 10s., closing with sellers at 10s., and buyers offering 10s. 9d. The shipments continue pretty good for the season, and the local demand is good, but the prices of makers' iron show a decided reduction on the week:—

G. M. B., at Glasgow (deliverable alongside).....	No. 1.	No. 3.
Gartsherrie ditto ditto	10s. 6d.	10s. 0d.
Coltress ditto ditto	11s. 6	10s. 0
Summerlee ditto ditto	11s. 6	10s. 0
Carronbank ditto ditto	10s. 0	10s. 6
Monkland ditto ditto	10s. 0	10s. 3
Clyde ditto ditto	10s. 0	10s. 9
Govan, at Broonielaw ditto	10s. 0	10s. 0
Dalrylton, at Glasgow ditto	10s. 0	10s. 0
Clyde, at Port Dundas, ditto	11s. 6	10s. 0
Glasgow, at Ardrosson ditto	11s. 6	10s. 6
Eglinton ditto ditto	10s. 6	10s. 6
Dalmeny ditto ditto	10s. 6	10s. 0
Carron, at Grangemouth, selected, ditto	11s. 6	—
Shotts, at Leith ditto	11s. 6	10s. 7
Kilmell, at Boness ditto	10s. 6	10s. 0
Bar iron .....	£13 0	
Nail rods .....	13 0	
SHIPMENTS.		
Week ending Nov. 29, 1873 .....	Tons 10,159	
Week ending Nov. 30, 1872 .....	11,392	
Decrease .....	1,733	
Total decrease since Dec. 25, 1872 .....	218,293	

The improbability of the resumption of the Spanish ore trade with this country for some time to come is stimulating the production of native to such an extent as to pay those engaged in the enterprise very liberally. In the meantime, there seems to be some slight fall in the demand for pig-iron, which is not only tending to weaken prices, but there has been a decrease on the shipments of the month past of 1889 tons. The stock in Connal's stores on Nov. 30 was 35,606 tons; and the furnaces presently in blast number 122 against 127 at the same date last year. Should the spring trade of 1874 assume anything like the proportions of that of the present year a sharp and rapid advance would be the inevitable result.

We regret that we have no improvement to report in Malleable Iron this week, the fluctuations in the pig-iron market, no doubt, rather staggering buyers. Shrewsbury surmises there are specifications to give out of some magnitude, and should this prove cor-

rect buyers have far greater chances of having to pay more at the beginning of the year than less by the delay. At the close of the year makers expect a rather lifeless market, and are quietly awaiting the result. Prices, meanwhile, are easier in sympathy with the fall in pigs, and substantial orders could be placed at about 5s. below the list price. The cognate branches of the trade are all well employed.

A company has been formed for the purpose of utilising the advantages to be derived from “Swain's” patent cupola and receiver. It is said to save fuel and produce a better quality of metal, and these advantages have induced several firms here to determine to test its capabilities.

The millmen at the Excelsior Ironworks, near Wishaw, whom the company sought powers to eject from their houses on account of their remaining on strike since Nov. 22, have been allowed decree by the Sheriff, to take effect after the lapse of ten days. The men had been brought from South Staffordshire, and filed, through their advocate, that they were in “total ignorance of the laws of this country in regard to the tenure of the lease of their houses,” &c.

The Coal Trade keeps quiet, and, as we hinted a couple of weeks ago, the price of coal is being reduced about 2s. a ton all round. The colliers, anxious no doubt to have their pockets well lined for the New Year holidays, are bemoaning their want of full employment—this was a source of exuberant joy not a month ago to them—and are calling on the masters to find employment for them. This the masters cannot do without resorting to binging, which means a reduction in the price, and so the blame of the position is most gracefully laid on the heads of the railway companies, who are alleged not to have a sufficient number of wagons to stow away such surplus output as is necessary to keep the men full time. We all recollect with what vehemence the miners' secretary cried out against permitting stocks of coal to accumulate, and with what enthusiastic cheer his advice was greeted by the men. They succeeded at the time, and we have reaped the fruits of that policy. Now they wish a change; 3½ days a week is not sufficient occupation, and when they cannot get it they want more. We are on the eve of a change, and we sincerely hope the lessons of the past year will prove instructive to all.

The East Coast trade is quiet, and, while there is some demand for parrot coal, the shipping orders could all be got easily through in a few days. From the Scotch ports the gross shipments of the week amounted to 55,841 tons, against a similar total of 35,699 tons in the corresponding week of last year.

**EXPERIMENTS WITH DYNAMITE.**—A number of exceedingly interesting experiments with Dynamite as a blasting agent were performed on Saturday near Cadder House, and other places between Bishopton and Kirkintilloch. They were conducted in the presence of Messrs. Robert Fraser (Gillespie, Catheart, and Fraser), George Crockett (sugar merchant), Robertson, Murdoch, Bryson, Gregor, Turnbull, Russell, and other gentlemen, several of whom are largely interested in landed and mining property in Canada and South America. The chief purpose of the experiments was to demonstrate the extraordinary facility with which the new blasting agent may be employed in clearing land and of boulder stones, and of the stumps and roots of trees, &c. Messrs. John Downie, C.E. (secretary and manager to the British Dynamite Company), and Geo. M. Roberts (chief chemist at the dynamite works Ardeer, Ayrshire), performed the experiments; and every person who witnessed them was greatly surprised with the ease and safety with which dynamite could be employed, coupled with its extraordinary eruptive force.

#### REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

**Dec. 4.**—In the South Staffordshire Iron Trade there is something quieter tone than last described; and, although no actual change is reported, the quotations have a weaker tendency for most descriptions of finished iron. It is improbable that there will be any change of importance in either branch of the trade before quarter-day. Everything depends, however, upon the course of the fuel market, which is at present in a very anomalous condition, maximum prices being maintained concurrently with a minimum demand. The finished iron makers complain that, under existing circumstances, the production of bars and other descriptions is unattended with profit, and in some cases ironmasters have resolved to close their works at the commencement of the new year, unless meanwhile relief is afforded in the cost of fuel. As a rule, the mills and forges throughout the district are now only working an average of three days per week. Marked bars remain at 14s.; second-class ditto, at 13½; and inferior ditto, 12s. to 12½. 10s. per ton. Ordinary sheets (single) are 14s. 10s. to 15s. per ton; and best ditto (Walden make) range from 20s. to 22s. 10s. per ton. Forged galvanised roofing sheets the quotations remain irregular, at 21s. to 25s. per ton. It is proposed to form a trade association among the producers of galvanised ironwork. The Pig-Iron Trade is steadier than for finished iron. All-mine (hot-air) of good brands are 7s. 10s.; part mine ditto, 6s. 5s.; and cinder, 4s. 15s. per ton. There is no change in the quotations for cold-blast and charcoal iron. The new process of puddling iron direct from the ore, invented by Mr. Gerhard, of Coseley, and which has already been described in our columns, is engaging the attention of the leading members of the Ironworkers' Association of this and of the North of England districts; and a joint-stock company, with a capital of 50,000L, and with practical ironworkers on the board of direction, will, we understand, shortly be launched.

The Coal Trade of South Staffordshire shows a drooping tendency; a reduction of 1s. per ton in the price of slack has been announced by Earl Dudley and other leading firms, but for the present the quotations for coal (especially of the better qualities) are steadily sustained. The demand is without improvement, and many of the collieries are working short time, owing to the scarcity of orders. It is generally expected that a substantial reduction in the price of coal will be declared early in the new year, if not before, notwithstanding the studious discouragement of such a belief on the part of some of the leading coalmasters.

The Sandwell Park trial-shaft is 302 yards deep, and no conclusive indications, whether favourable or otherwise, have yet been met with. The promoters of the enterprise are, however, still sanguine of ultimate success, and as the original capital of the company (20,000L) is expended, they are raising a further sum of 10,000L, by the issue of 50L shares, to be allotted *pro rata* among the holders of original shares.

Electric signals have been successfully introduced into some of the coal mines in North Staffordshire—the Longton Hall Colliery, of Messrs. Glover and Co., and the Goldenhill Colliery, of Messrs. Goddard and Son. The signal wire is composed of a copper core coated with gutta percha, and is secured to the brickwork of the shaft, where it is comparatively free from exposure to injury. There is one wire to each shaft, and instantaneous signals can be sent from the hooker-on to the engine-man, and *vice versa*. The hooker-on presses a small button, and a clear and unmistakable signal is instantaneously given in the engine-room. The inventor is Mr. Thomas Turner, chemist, of Longton.

Current quotations of stocks and shares in local coal and iron companies are as follow:—Sandwell Park Colliery Company, 150, buyers; Cannock and Huntington Colliery Company, 14½ premium; Cannock and Wimbley Company, 14 premium, buyers; Chiltington Iron (10L paid), 7s.; Bagnall and Sons, 10s. sellers; Pelsall Iron, 1½ prem.; Staffordshire Wheel and Axle, 4 premium; Patent Shaft and Axletree Company, 8 prem. The Hawne Collieries prospectus is understood to have been well received, and the allotment scrip is quoted by anticipation ½ to 1 prem., sellers.

workings in the colliery that they should give way.—The President said the question was whether it was desirable that the stoppings should be temporary or permanent. If it were right that they should be blown down by an explosion they should be less substantially built, and one portion should be made to open easily. —Mr. Storey said they could not tell in what part of a pit an explosion was to take place, therefore they could lay down no rule which could be adopted in all places. In planning the ventilation he should believe in making the stopping solid.—Mr. Moffitt said they ought to arrange so that the ventilation of a pit could be restored as quickly as possible after an explosion.—Mr. Haines thought that Mr. Lucas's plans were admirably adapted to steep gradients, while Mr. Moffitt's were adapted to flat mines, such as his own.—The feeling of the meeting appeared to be about equally divided in favour of the two systems. Both Mr. Moffitt and Mr. Lucas were cordially thanked for the interest and trouble they had taken in laying the question fairly before the Institute. A resolution was proposed in favour of altering a rule for excluding from ordinary membership all who were not "either coal or iron masters, mining or mechanical engineers, or certified colliery managers," thus striking out of the rule "other persons interested in mining." The question was referred to the Council of the Institute.

**DUDLEY MINING INSTITUTE.**—An ordinary monthly meeting of the South Staffordshire and East Worcestershire Institute of Mining Engineers was held on Monday in the Geological Museum, Dudley. Mr. W. Blakemore presiding.—Some formal business having been disposed of, Mr. John Hughes suggested that some of the funds of the Institute, which were rapidly accumulating, should be spent in paying first-rate lecturers to deliver lectures on ventilation, the use of the barometer, the dispersion of foul gases, and other kindred subjects.—The suggestion was received with approval.—The President said he quite agreed with Mr. Hughes, and the delivery of such a course of lectures would bring about energy among all classes of members of the Institute. Such bodies required that there should be interchange of thought and constant teaching of the younger members, otherwise institutes were in danger of expiring from inaction. Referring, then, to the question of inventing a hand coal-cutting machine, the President said that in such small collieries as those of South Staffordshire a machine which could be carried about and worked by one man would be an invaluable boon.—Mr. Blakemore then went on to say that it would be very desirable to have, if possible, at their annual meeting the inventor (a Frenchman) of a machine to enable miners and others to breathe by means of a charged knapsack in the midst of noxious gases.—Mr. Davies said he had heard of the successful results of the invention, and the secretary was instructed to write to the inventor.—Mr. Hughes said that he had seen at Haden Hill a Winstanley's coal-cutting machine. Where the coal was close and in one lump the machine worked well, but where it was loose the falling coal choked the teeth. What was wanted was a hand coal-cutter.—Mr. Thompson proposed that the Council take into consideration the advisability of giving a premium for the best hand coal-cutting machine, and report to the next meeting.—Carried unanimously.

#### REPORT FROM MONMOUTH AND SOUTH WALES.

**Dec. 4.**—There has been but little advancement in the Iron Trade towards greater activity during the week, but advices continue to be somewhat more favourable than a short time ago. There is not much doubt that buyers have some good orders for finished iron to give some time or other, but when they will reach makers' books is rather uncertain. There are some buyers who still cling to the belief that there must eventually be a fall in the quotations for manufactured iron, and for this reason they may be expected to enter into transactions, but sparingly until such time as either that quotations are lowered, or that they are convinced that they cannot realise their expectations. Beyond this, however, it must be remembered, trade is usually dull towards the end of the year, and after what has recently transpired it is not surprising that there is not much business doing just now. However favourable the general state of things may appear for the transaction of business, it cannot now be expected that they will be many new contracts entered into before the end of the year. Russia has, there is every reason to believe, some extensive rail orders to put in the market again, and very possibly a good number of them will come to this district, but for two or three months at least iron cannot be delivered to those northern ports, and, therefore, there cannot be a large Russian trade done until the return of the spring. As to what will come from other quarters it is not very easy to forecast. The iron exports during the week have been considerably below the average. Aberdare Iron Company have cleared 1,000 tons rails to Aarhuis; Tredegar Company, 141 tons to Oporto; Blaenavon Company, 345 tons to Gothenburg; Ebbw Vale, 820 tons to Helsingfors. The Landore (Siemens' patent) Works display about the greatest activity of any establishment in the district, and are principally employed in turning out steel rails. The Tin-Plate Trade remains just the same as for some time past. Disputes are now arising between masters and men about the method of working, which has been a topic by makers, and which, it is alleged, prevents the best workers from getting as high wages as they have been used to.

The Coal Trade continues active, although advices differ. The colliers are still working with regularity, so that an immense output is kept up, and colliery proprietors are enabled to send a much larger quantity of coals of all description into the home and foreign markets. Hitherto the supply must appear to have exceeded the demand, taking it all through; but there are some who think that if the supply goes on increasing it is but a fall in prices. Whether this will be the case or not, of course, time alone will decide, but it would appear that the time when coal will be a drug in the market is a long way off. At present the demand may be described as good, and prices firm.

There is no doubt that at no distant date the quantity of coal Wales will be enabled to send into the market almost double the quantity she is now sending. I state last week that the newest and most striking announcement is the Swansea & North Colliery Company, with a capital of 200,000, for the purpose of working collieries on the property of Mr. H. H. Vivian, M.P. "The South Wales Telegraph," which is an authority in these matters, speaks highly of the company, and says the direction is a practical and influential one, and also that the purchase has been effected on very moderate terms.

The change of management at the Pontnewydd Works has taken place, and Mr. Ezra Riley has been succeeded by a Mr. Harvey, of Woolwich.

The colliers and others connected with the Penygraig Colliery, Dinas, have presented their manager, Mr. Rowland Rowland, with a very appreciable testimonial. Some 250 sovereigns were subscribed, and out of this they have given him and his wife valuable gold watches, an illuminated address, and a purse of gold.

#### REPORT FROM DERBYSHIRE AND YORKSHIRE.

**Dec. 4.**—Mining operations in Derbyshire have been unchanged since our last notice. The lead mines are working steadily, but there is no appearance of any new ground being broken into; indeed, capitalists do not appear to have a very high opinion of Derbyshire as regards its lead ore; or, perhaps, it might be better put by stating that there are very few company promoters who have paid much attention to the Peak and the other districts, so well known in connection with the oldest of our mining industries. The Coal Trade continues very quiet for the time of year, and the tonnage being sent to London is by no means large, yet merchants are trying hard to keep up prices. In the early part of the week it was stated on good authority that there were upwards of 1,000 loaded wagons at King's Cross waiting to be ordered. Yet on Wednesday a slight reduction in price took place, but for what reason it is difficult to say, for several collieries engaged in the London trade are even now actually working short time. However, a very strong effort will be made to increase the present price, but this will not be a very easy matter, more especially should the weather continue as it now is. With decreased exports, and a marked diminution in our iron manufactures, coal ought to be much cheaper than it now is. The Ironworks in Derbyshire continue to be very well employed, and the production of pig has in no way fallen off. The foundries and mills appear to be doing very well. There have been some disputes between colliery owners and their men, and Mr. Normans has been over to Dronfield, at Messrs. Lucas's and other pits, to endeavour to arrange matters.

In Sheffield trade has undergone but slight change for the better in one or two branches, whilst it remains much the same with regard to the others. Amongst the establishments doing an extensive business is that of Messrs. Crowley and Co., the largest malleable works in the world, and celebrated for the exquisite finish of the goods they turn out, so that they can scarcely be told from steel. The firm has recently made castings for a variety of purposes for which this description of iron was not previously used. They include lawn-swinging-machine stands, weaving-machines, lawn-mowers, foot-lathes, bicycles, fly-presses, magnetic hammers for picking up tacks, boot heel and toe plates, &c. Articles expensive and difficult to forge, or many of those made of brass, are now made of malleable iron, and are in every way equal to those made of more expensive material. Standing almost alone in the quality of their productions, Messrs. Crowley and Co. enjoy a high reputation not only in England, but in more distant countries, some of their ornamental castings, in particular, such as palisades, coal-boxes, flower vases, fruit dishes, in-cards, vases, tenders, Gothic ornaments, coats-of-arms, and entrance-gates, are not only sharp in outline, but many of them brilliantly polished and equal to the finest mirror. Patent carburetted malleable cast iron, it may be said, is of considerable advantage where strength is an essential, whilst it is a great deal cheaper than forgings. The works of the firm in Kellam-street are very extensive, and from them are sent out the finest castings produced to almost every part of the world. The new works at Meadow Hall are now in full activity, and from which a variety of machines are now being sent out. We have been thus induced to notice the establishments of the Messrs. Crowley from the fact that they stand alone as the makers of those useful and ornamental castings which are necessary in connection with other works, but are also to be found in the drawing rooms of the wealthy.

The Coal Trade is quiet, and in some parts of South Yorkshire the men were only working four or five days a week, owing to the absence of orders.

At several of the collieries the men are seeking for an advance of wages, and there is considerable disquietude in the district. At The Hones, where some matters were left to arbitration, the award has been refused, and the arbitrators will have to go over the same ground as they have previously done. At The Monk Bretton Colliery, near Barnsley, the men resumed work on Thursday morning, having been out since Saturday, a promise having been made that their grievances should be considered.

Two men, named Hencliffe and Greenwood, were killed, on Wednesday, by a fall of roof and coal in the New Oaks Colliery, near Barnsley. More than 20 tons of stuff fell on the two men.

The boys employed at the Old Oaks Colliery met together, on Thursday, before they reached the pit, and agreed not to work. The reason was that, as they had been in the habit of working until 3 o'clock on Saturdays, whilst the men left off at 12 o'clock, they determined to have the same hours as the colliers.

Accordingly, on Saturday last they left at 12 o'clock, and, on its being intimated to them that a quarter of a day's wages would be stopped for their leaving, they determined to strike. The result was that the men had to go home, and the pit was "set down."

**MIDLAND INSTITUTE OF MINING ENGINEERS.**—On Wednesday an ordinary meeting of the members was held in Barnsley. There was a very good attendance, the chair being occupied by Mr. M. Maddison, the president. After some preliminary business had been transacted an interesting discussion took place on the subject of oil-cutting machinery, and the desirability of appointing a committee to enquire into the merits of the various coal-cutting machines now in use. It was agreed that the council of the Institute and a committee of 12 members should be appointed to make the necessary enquiries, and be empowered to spend a sum of money not exceeding £50, for that purpose. It was also intimated that, in all probability, the colliery proprietors would aid in forwarding the objects of the Institute in a matter of such importance to themselves.—Mr. Hopkins then read an elaborate paper "On Underground Fires in Collieries," which was ordered to be printed. Mr. S. Firth also read a paper "On a Uniform Rail Gauge for Collieries." The writer, whilst stating that he was not tied to any particular gauge, suggested that a uniform breadth of from 21 to 30 in. should be adopted. It was agreed that the two papers should be discussed at the February meeting.

#### TRADE OF THE TYNE AND WEAR.

**Dec. 4.**—A good business has been done in most kinds of coal during the week; coals are, however, getting more plentiful, and sellers are quite willing to make contracts for next year for the delivery of both coal and coke at or about rates now current. The attention of the miners is directed to the reduction of the output of coal as far as practicable, in order to keep up prices, and so prevent any fall in wages, but the natural law of supply and demand will render futile any attempt of this kind. The average wages of good coal hewers in Northumberland is now upwards of 10s. per day, and in Durham about 7s. 6d. per day. These high wages, which are got for working only short hours, are attracting men of all kinds to the mines—numbers of sailors, fishermen, and also clerks from the desk, have entered the mines lately—and in Durham especially men are to be found from every part of the United Kingdom. There is, in fact, no lack of men to work the mines, so that the increase of output is only a question of time. New coal mines are being opened out in every direction. In Northumberland many small works are being opened out, and also some large works, the most important being at Acklington, Shire Moor, &c.; and in Durham very extensive works are now considerably advanced at various points, the most important being at Silks Norton, Eldon, near Ferryhill; the Brownay Colliery, near Durham City, and many other places.

The Iron Trade continues quiet, but a good business has been done lately in pig-iron, at current rates. The demand for finished iron continues very limited, and prices of all kinds, both pig, rails, &c., are drooping. Much attention has been paid lately to the quality of the iron produced in Cleveland, and it has been much improved by a liberal admixture of hematite ore from Cumberland, and also by mixing ores from Spain and other foreign countries.

One of the most remarkable aspects of the crude iron trade is the increasing disposition to import foreign ores, in order to improve the quality of the Cleveland iron. An analysis of blast-furnace metal or pig-iron from unmixed Cleveland ore shows 1.19 of phosphorus, 0.30 sulphur, 1.85 of silicon, 1.10 of oxygen, and 3.30 excess of carbon. All these are vitiating elements, disqualifying the Cleveland iron from being used for high-class purposes, such as the manufacture of steel. The expulsion of these elements is impossible in the ordinary process of manufacture, but their percentage may be reduced by using in combination with the local ironstone a purer and richer ore. It was this consideration that primarily led to the opening up of the large mines in Spain, now owned by several Cleveland firms, and the stoppage of the supply of Spanish ore, consequent upon the evolution, has led the ironmasters of the North of England to turn their attention to other sources of supply. The largest quantity of Spanish ore yet imported into the North in a single year has been short of 400,000 tons—more drop in the bucket compared with the 2,000,000 tons of ironstone annually raised from the Cleveland mines. But this importation is now likely to be largely supplemented by supplies from Africa, where a very large body of ore has recently been discovered. We understand that Bolckow, Vaughan, and Company are making arrangements for the importation of large quantities of this African ore, and other firms in the Middlesbrough district are endeavouring to negotiate the acquisition of African royalties. The ore is said to be exceptionally rich and pure, and its composition showing over 6 per cent. of metal; an 11t will be delivered in the Tons for 25s., to 2s. per ton, the cost of freight from Tyneside being very little more than that of Spanish ore from Billiton. It is quite on the cards that this new enterprise will lead to the most important commercial results by establishing the nucleus of a large and lucrative trade with Africa. Wills on this subject we may add that the ironstone in Portugal, to which allusion was made in these columns some time ago, has been prospected and arrangements are now being made for their development. The time is evidently at hand when the ironmasters of Cleveland will rival those of Scotland, Wales, and other districts in the production of a high-class quality of iron, suitable for all the purposes of metallurgical industry, and perhaps giving rise to the establishment of branches of the trade hitherto new to Cleveland.

Mr. W. Wilson, Babbide Colliery, has been presented with a purse of gold by his friends, on the occasion of his leaving his present situation for one at Winterton Colliery.

**NORTHERN INSTITUTE OF MINING AND MECHANICAL ENGINEERS.**—A general meeting of members will be held in the Wood Memorial Hall, Newcastle, on Saturday, when paper will then be read by Mr. Frederick Hard "On Hard and Simple Patent Air-Compressing and Self-Acting Coal-Cutting Machinery, or Stratton Work, Long Wall, and Pillar and Stall Work," which will be illustrated with drawings and models. Mr. J. B. Simpson will read a paper "On Natural Shafts in the Coal Measures of Belgium," translated from the French of Messrs. Cornet and Briart. The secretary will read a paper "On Raising Coal from Great Depths by Means of Atmospheric Pressure," on the system of Mons. Z. Blanchet, translated from the French.

#### SCIENTIFIC EDUCATION OF OFFICERS IN METALLIFEROUS MINES—UNIVERSITY COLLEGE OF WALES.

A twelve-month since we referred to the creditable amount of energy displayed by those connected with the UNIVERSITY COLLEGE OF WALES, which had commenced its first session a few weeks previously with a very satisfactory number of students, and it was suggested that the teaching power of the institution might therefore be still further utilised by arranging the natural science chairs so as to make the instruction given available to the vast number of men connected with metalliferous mines in need of scientific knowledge. The college has now commenced its second session, and the committee has certainly shown a very laudable desire to provide to the utmost for the requirements of all classes of students who may enter the college, by deciding soon after its establishment to appoint a professor of Natural Science. That the field which such a professorship would have to cover is a very large one cannot be questioned; but considering that there is a good class for elementary chemistry already established, the arrangement may well be regarded as satisfactory, and one calculated to prove alike advantageous to the students and to the college until the time shall arrive for further increasing the number of professorial chairs. To determine the special province of the gentleman entrusted with a professorship of so extensive a character is by no means an easy task, but it is probable that he would find the readiest method of occupying the field allotted to him would be to make geology the basis for his lectures, treating the several sciences bearing thereupon in such a manner as to furnish something more than an elementary outline of them.

To perform the duties of Professor of Natural Science in the manner suggested will, no doubt, involve much labour, but it need not be doubted that the energy of the committee will have made such a selection from amongst the candidates for the professorship as will ensure not only the judicious arrangement of a programme but its successful carrying out. In teaching geology thoroughly it would be absolutely essential to give the student a fair amount of sound instruction in mineralogy; but in addition to this he would extend his treatment of palaeontology so as to embrace animal physiology and comparative anatomy, and similarly would supplement his lectures on fossil botany, so as to include a full outline of vegetable physiology generally. The development of some such scheme, with the advantage of the co-operation of the professor at present in charge of the chemical class, and who being in every respect competent, could readily vary his lectures so as to make them embrace

not only the elements of chemistry, but metallurgical chemistry and a thorough explanation of the application of chemistry in connection with the arts and manufactures, would place the student in possession of so complete an outline of technical knowledge that he would experience no difficulty in subsequently fitting it in so as to adapt it to his immediate requirements, no matter what might be the particular branch of industry to which he might afterwards decide to devote himself.

The establishment of the chair of Natural Sciences will render the UNIVERSITY COLLEGE OF WALES as attractive a technical school, whether for miners or for those preparing for general industrial pursuits, as need be desired, for, as has already been explained, it is admirably located with regard to metalliferous mines, collieries, and metallurgical works, whilst the students are afforded every opportunity for so sound a general collegiate education that they will be enabled to avail themselves of all the published records of the most recent researches of the leading technologists both of this country and the Continent. There will now be the natural science classes, in addition to those of Greek, Latin, mathematics, modern languages, logic, mental and moral philosophy, English language and literature, comparative philology, natural philosophy, chemistry, and ancient and modern history and geography, each in charge of a professor thoroughly competent for the task he has undertaken, so that it will assuredly be the student's own fault if he do not so profit from the instruction received as to render himself independent of all further aid, except such as may be obtainable from the writings of those who especially give their attention to discoveries and processes more directly connected with the particular trade or calling in which he may afterwards be engaged. We do not know what progress has been made toward the completion of the endowment fund of the University, but from the energy displayed by the committee, and the devotedness of the principal and professors of the college, it may fairly be hoped that financial difficulties will be last with which the University may be troubled. It happily appears to be at present in a highly prosperous and progressive condition, and the continuance of that prosperity is certainly well deserved.

**WATSON BROTHERS,**  
1, ST. MICHAEL'S ALLEY, CORNHILL, LONDON, E.C.

**SATURDAY.**—Market moderately active. Grenville and Crebior shares largely dealt in. Grenville, 6½ to 7; Crebior, 4½ to 5; Carn Brea, 35 to 36; Dolcoath, 47 to 50; Hington Down, 37s. 6d. to 40s. Old Treburchett (pref.), 12s. 6d.; Tincroft, 38 to 40; South Roman Gravels, 19s. to 21s.; Van Consal, 4 to 4½; West Basset, 8 to 9; Chontales, 7½ to 1; Emma, 3 to 3½; Flagstaff,

MONDAY.—Active demand for Grenville, Crebior, 4½ to 5; Old Treburchett, East Lovell, and West Cliverton shares. Grenville, 6½ to 7; Crebior, 4½ to 5; Old Treburchett, 12s. 6d. to 17s. 6d.; East Lovell, 10½ to 11½; West Cliverton, 4½ to 5½; Providence Mines, 7½ to 8½; South Frances, 8 to 10; Wheal Argus, 1 to 1½; Carn Brea, 14 to 15; Penneyer, 12 to 22; Penstruthal, 20s. to 22s.

TUESDAY.—Market very dull, and prices about the same as yesterday. The market continues very quiet. Crebior, 4½ to 5½.

WEDNESDAY.—With the exception of a demand for Crebior shares at an advance, the market continues very quiet. Crebior, 4½ to 5½.

THURSDAY.—Very little business doing, and prices, if anything, flatter.

FRIDAY.—Market a shade firmer for shares in tin mines. Carn Brea, 34 to 35; Cook's Kitchen, 11 to 12; Great Laney, 13½ to 14; Marke Valley, 1 to 1½; Providence Mines, 7½ to 8½; South Frances, 8 to 10; Wheal Argus, 1 to 1½; Carn Brea, 14 to 15; Penneyer, 12 to 22; Penstruthal, 20s. to 22s.; Emma, 3 to 3½; Chontales, 7½ to 1; Emma, 3 to 3½; Flagstaff, 3 to 3½; Sweetland Creek, 5½ to 5½.

#### THE COAL MINES REGULATION ACT, 1872.

##### EXAMINATION FOR MANAGERS' CERTIFICATES OF COMPETENCY.

DISTRICT UNDER THE CHARGE OF

J. WILLIS, ESQ., HER MAJESTY'S INSPECTOR OF COAL MINES.

**NOTICE IS HEREBY GIVEN**, that an EXAMINATION for MANAGERS' CERTIFICATES OF COMPETENCY, under the above-named Act, will be HELD on the 13th day of January, 1874, and on the 6th day of January, 1874, notify such intention to the Secretary of the Board of the above-mentioned District, from whom all information as to particulars may be obtained.

By order of the Board,

G. W. BARTLETT, Jun., Secretary,  
Address, Darlington.

#### INSPECTOR OF COAL MINES.

**AN OPEN COMPETITION FOR TWO SITUATIONS** will be HELD in LONDON, on TUESDAY, 16th December, 1873, and FOLLOWING DAYS. Limits of age 23 and 35. Candidates must have been employed within the last five years for at least two years underground in a coal mine. To persons appointed Inspector will act first as Assistant to one of the existing Inspectors. He will receive a salary, commencing at £300, rising £25 a year to £450. As vacancies occur he will be eligible for promotion to the charge of a district, and will upon promotion receive a salary of £250, rising £25 a year to £350. He will be required to reside at such a place as may be from time to time fixed upon by the Secretary of State. He will be allowed, in accordance with regulations issued from time to time, his travelling expenses, together with an allowance for his personal expenses when inspecting collieries at a distance from his residence.

Application for the regulations, and for the necessary form, should be made once to the Secretary, Civil Service Commission, London, S.W.

**NICKEL AND COBALT REFINING, AND GERMAN SILVER WORKS,** 16, COOZELL STREET NORTH, BIRMINGHAM.

STEPHEN BARKER begs to inform the Trade that he has the following classes for sale:—REFINED METALLIC NICKEL, REFINED METALLIC BISMUTH, OXIDE OF COBALT, GERMAN SILVER IN INGOTS, SHEET, WIRE, &c.

NICKEL AND COBALT ORES PURCHASED.

**GOLDENHILL COBALT, NICKEL, COLOUR, BORAX, AND CHEMICAL WORKS,** NEAR STOKE-UPON-TRENT, STAFFORDSHIRE.

JOHN HENSHALL WILLIAMSON, MANUFACTURER AND REFINER Purchaser of Borate of Lime and Tincal.

**BARYTES (**

IN THE MATTER OF THE COMPANIES ACT, 1862;  
AND OF THE

## CONNORRE MINING COMPANY (LIMITED).

THE CREDITORS of the ABOVE-NAMED COMPANY are required on or before the 15th day of January, 1874, to SEND THEIR NAMES AND ADDRESSES, and the PARTICULARS of THEIR DEBTS or CLAIMS, and the names and addresses of their Solictors (if any) to THOMAS BAKER, of No. 27, Dame-street, in the City of Dublin, the Official Liquidator of the said company, and, if so required by notice in writing from the said Official Liquidator, are by their Solictors to COME IN AND PROVE THEIR SAID DEBTS OR CLAIMS at the Chambers of the Right Honourable the Master of the Rolls, Four Courts, Dublin, at such time as shall be specified in such notice, or in default thereof they will be EXCLUDED from the BENEFIT of any DISTRIBUTION made before such DEBTS are PROVED.

Thursdays, the 5th day of February, 1874, at Eleven o'clock in the forenoon, at the said chambers, is appointed for hearing and adjudicating upon the said debts and claims.

B. E. WHITESTONE, Chief Clerk.

JOHN SMYTH, Solictor for said Official Liquidator, 2, Clare-street, Dublin.

Dated this 1st day of December, 1873.

## IN THE MATTER OF THE COMPANIES ACTS, 1862 AND 1867;

## AND OF THE

## EAST CWM VRON LEAD MINING COMPANY (LIMITED).

NOTICE IS HEREBY GIVEN, that all CREDITORS and other PERSONS having any DEBT, CLAIM, or DEMAND against the above-named company are hereby REQUIRED TO SEND IN the PARTICULARS of all such DEBTS, CLAIMS, and DEMANDS to ESSEX WHYTE LAYTON, of 4, Loftbury, in the City of London, the Liquidator of the said company, on or before Tuesday, the 23rd day of December, 1873; and in default thereof they will be EXCLUDED from the BENEFIT of any DISTRIBUTION made before such DEBTS, CLAIMS, and DEMANDS are PROVED.

E. W. LAYTON, Liquidator.

## IN THE MATTER OF THE COMPANIES ACTS, 1862 AND 1867;

## AND OF THE

## EAST CWM VRON LEAD MINING COMPANY (LIMITED).

NOTICE IS HEREBY GIVEN, that all CREDITORS and other PERSONS having any DEBT, CLAIM, or DEMAND against the above-named company are hereby REQUIRED TO SEND IN the PARTICULARS of all such DEBTS, CLAIMS, and DEMANDS to ESSEX WHYTE LAYTON, of 4, Loftbury, in the City of London, the Liquidator of the said company, on or before Tuesday, the 23rd day of December, 1873; and in default thereof they will be EXCLUDED from the BENEFIT of any DISTRIBUTION made before such DEBTS, CLAIMS, and DEMANDS are PROVED.

E. W. LAYTON, Liquidator.

## IN LIQUIDATION.

## AND OF THE

## EAST CWM VRON LEAD MINING COMPANY (LIMITED).

NOTICE IS HEREBY GIVEN, that all CREDITORS and other PERSONS having any DEBT, CLAIM, or DEMAND against the above-named company are hereby REQUIRED TO SEND IN the PARTICULARS of all such DEBTS, CLAIMS, and DEMANDS to ESSEX WHYTE LAYTON, of 4, Loftbury, in the City of London, the Liquidator of the said company, on or before Tuesday, the 23rd day of December, 1873; and in default thereof they will be EXCLUDED from the BENEFIT of any DISTRIBUTION made before such DEBTS, CLAIMS, and DEMANDS are PROVED.

E. W. LAYTON, Liquidator.

## IN LIQUIDATION.

## AND OF THE

## EAST CWM VRON LEAD MINING COMPANY (LIMITED).

FOR SALE, BY TENDER, the UNDERMENTIONED PLANT and MACHINERY, also the TENANT'S RIGHTS to the BUILDINGS and the MINES, viz.:—

ONE 30 in. CYLINDER PUMPING ENGINE (nearly new), 10 ft. stroke in cylinder and 9 ft. in shaft, made by Messrs. Harvey and Co., with a new 12 ton BOILER.

16 ft. shears.  
10 ft. door piece.  
2 horse whimes.  
200 fms. 9 in. capstan rope; 2 wire ropes.

32 flat rows and bearings.  
6 ft. arm capstan.  
10 ft. shears.  
balance bob.

24, 16, and 15 in. pumps.  
16 in. door piece.  
16 in. door piece.  
16 in. windorse.  
16 in. plunger.

17 in. plunger case.  
1 stuffing box and gland.  
12 in. plunger.  
13 in. plunger case.  
1 stuffing box and gland.

And a variety of other articles in general use in mines.

The property is situate near the town of Llanilloes, in Montgomeryshire, and is believed to be very valuable, and well worth the attention of those connected with the mining industry.

The property can be viewed, and full particulars obtained by application to Capt. J. KITTO, of Llanilloes.

Tenders must be sent in to the Liquidator, ESSEX WHYTE LAYTON, Esq., 4, Loftbury, London, not later than the 23rd day of December next. Conditions can be seen at the offices of Mr. LAYTON, as above, or at Capt. KITTO's office.

E. W. LAYTON, Liquidator.

## NATIONAL PROVINCIAL BANK OF ENGLAND.—

112, Bishopsgate street, London, 2nd Dec., 1873.

The Directors of the National Provincial Bank of England hereby give notice, that a HALF YEARLY DIVIDEND at the rate of EIGHT PER CENT. PER ANNUM, and a HALF YEARLY BONUS of EIGHT PER CENT., will be payable on the Company's Stock on and after the 9th day of January next, when the Dividend and Bonus Warrants may be obtained at the Company's Office, No. 112, Bishopsgate street (corner of Threadneedle-street), or at the different Branches.

The Transfer Books will be closed on and after Saturday, the 6th instant, until the Dividend and Bonus become payable.

By order of the Court of Directors,

E. ATKINSON,  $\frac{1}{4}$  Joint General Managers.

W. HOLT,  $\frac{1}{4}$

THE CAPE COPPER MINING COMPANY (LIMITED).

Notice is hereby given, that at a meeting of the directors of this company, held today, it was resolved:—

That a DIVIDEND of TWENTY SHILLINGS PER SHARE, free of income tax, be now DECLARED, PAYABLE on the 20th day of December instant; and that the Transfer Books be closed from the 17th to the 24th instant, both days inclusive.

By order of the Board, J. C. LEAVER, Secretary.

5, Queen-street place, Upper Thames street, London, E.C.,

3rd December, 1873.

## PONTGIBAUD SILVER-LEAD MINING AND SMELTING COMPANY.

Notice is hereby given, that at the ANNUAL GENERAL MEETING, held in Paris on the 29th ult., the DIVIDEND for the year 1872/3 was fixed at FIFTY FIVE FRANCS PER SHARE. The sum of 25 francs per share was paid on account of the same on the 5th June last, and the balance of 30 francs per share will be paid in exchange for the twelfth dividend coupon on and after the 5th day of December instant, at the offices of the company, No. 15, Rue de Chateaudun, Paris, or at the London Agency, No. 11, Queen-street place. The payments made in England for such balance of dividend will, after allowing for French tax and exchange, be at the rate of £1 3s. per share, subject to the deduction of income tax.

JOHN TAYLOR AND SONS.

London Agency, No. 11, Queen-street-place, E.C.,

December 1, 1873.

## WALKER'S NEW STAMPS BED FOR CONCENTRATING GOLD, TIN, AND OTHER ORES.

Also the DIRECT CENTRAL LIFT STAMPS FOR CRUSHING QUARTZ, TIN, &c.—Apply to J. WALKER, 12, James-street, Old-street.

## ONE NEW 9-inch SLIDE SURFACING and SCREW-CUTTING LATHE, 12 ft. gap bed, FOR SALE.

CRAMPTON BROTHERS, TOOL MAKERS, SHEFFIELD.

## MR. T. L. COTTINGHAM OFFERS TO CAPITALISTS:—

TWO GOOD WELL FITTED GOING COLLIERIES.

ONE SILVER-LEAD SETT, proved very rich.

ONE LEAD ditto.

ONE IRON ditto.

And a PROPRIETOR'S INTEREST in a RICH GOLD SETT.

FOR SALE—A CAPITAL PERCUSSION TABLE, in first rate condition.

Mold, Dec. 1, 1873.

## MESSRS. PARKYN AND CO., ST. AUSTELL, CORNWALL.

MESSRS. PARKYN AND CO. would advise immediate PURCHASE in NEW FOWEY, EAST ST. DENNIS, &c.

PARKYN and CO. have DEBENTURE BONDS FOR SALE bearing 10 per cent. interest, paid half yearly; these are safe, and should be secured, they having bought £2000 themselves, and have only a few to dispose of.

SEVERAL GOOD HEMATITE IRON MINES TO DISPOSE OF.

Thirty Years' experience.

Bankers: South Cornwall Bank, St. Austell.

## STOCKS AND SHARES OF EVERY DESCRIPTION BOUGHT AND SOLD by MESSRS. H. HALFORD AND CO., of 27, LOMBARD STREET, E.C.

MULINDUR VALLEY LEAD MINING COMPANY shares are strongly recommended.

Price is now  $\frac{1}{2}$  prem., and will be double this price in a few weeks.

GLYNGWILL CO. shares at 2½%, and no further liability; are first-class investment. Every information will be afforded on application.

MESRS. S. R. COCKS AND CO., MINING ENGINEERS, &c., ROCHE, ST. AUSTELL.

COPPER MINE GRANT OR SETT FOR SALE.

TIN MINE " "

SLATE QUARRY " "

CHINA CLAY " "

IRON MINES " "

Also, 24 heads of STAMPS, iron axles, four cams to the round, and dressing appliances.

Prices and particulars on application.

Mines Inspected, and confidential reports and surveys made.

MESRS. GROSVENOR AND CO., SHAREBROKERS, 18, PORTLAND STREET, MANCHESTER, beg to inform their clients and the public in general that they have for sale a few shares in each of several most promising Progressive Mines, which they fearlessly assert will shortly return to investors enormous profits on a small outlay and at a nominal risk.

CAPTAIN ABSALOM FRANCIS, GOGINAN, ABERYSTWITH, MINING AGENT, ENGINEER, AND SURVEYOR.

The great success which is attending the opening and working of the Mines in the counties of Cardigan and Montgomery, and the many properties placed at the disposal of Capt. ABSALOM FRANCIS, induce him to offer his services either to ADVISE, INSPECT, REPORT, or SURVEY, for Mining Companies or private shareholders.

For terms, apply to Capt. ABSALOM FRANCIS, as above.

THE COURT OF THE VICE-WARDEN OF THE STANNARIES, STANNARIES OF CORNWALL.

IN the MATTER of the COMPANIES ACT, 1862, and of the REPERRY TIN AND COPPER MINING COMPANY (LIMITED).—

Notice is hereby given, that, by an Order made in the said matter, dated the 29th day of November last, THOMAS CHIRGWIN, of Truro, Accountant, was appointed OFFICIAL LIQUIDATOR of the said company.

FREDERICK MARSHALL, Registrar.

Dated Registrar's Office, Truro, 3rd December, 1873.

THE COURT OF THE VICE-WARDEN OF THE STANNARIES, STANNARIES OF CORNWALL.

IN the MATTER of the COMPANIES ACT, 1862, and of the REPERRY MINING COMPANY.—Notice is hereby given, that, by an Order of the said Court, made in the said matter, dated the 27th day of November last, RICHARD WHITFORD, of Truro, within the said Stannaries, Gentleman, was appointed OFFICIAL LIQUIDATOR of the said company.

FREDERICK MARSHALL, Registrar.

Dated Registrar's Office, Truro, this 3rd day of December, 1873.

THE COURT OF THE VICE-WARDEN OF THE STANNARIES, STANNARIES OF CORNWALL.

IN the MATTER of the COMPANIES ACT, 1862, and of the REPERRY MINING COMPANY.—Notice is hereby given, that, by an Order of the said Court, made in the said matter, dated the 27th day of November last, RICHARD WHITFORD, of Truro, within the said Stannaries, Gentleman, was appointed OFFICIAL LIQUIDATOR of the said company.

FREDERICK MARSHALL, Registrar.

Dated Registrar's Office, Truro, this 3rd day of December, 1873.

THE COURT OF THE VICE-WARDEN OF THE STANNARIES, STANNARIES OF CORNWALL.

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FREDERICK MARSHALL, Registrar.

Dated Registrar's Office, Truro, this 3rd day of December, 1873.

## CORNWALL.

## IN LIQUIDATION.

IMPORTANT SALE of the VALUABLE MELLANEAR COPPER MINE, situated in the parish of ST. ERTH, near the town of Hayle, with the FIXED PLANT, PUMPING and WINDING ENGINES and MATERIALS as now in work.

MESRS. WILKINSON and HORNE are instructed by the Liquidator, to SELL BY AUCTION, on Monday, the 22nd of December, at the Mart, Tokenhouse yard, in the City of London, at Three o'clock precisely, in One Lot, the MELLANEAR MINE,

together with the whole of the valuable MACHINERY, PLANT, and EFFECTS thereof, including an 80 in. cylinder, pumping engine, a 76 in. ditto, a 24 in. rotary engine, heavy pitwork, and all other requisite machinery and implements for keeping the mine in full work.

A more descriptive announcement will appear next week, when printed particulars may be had, and in the meantime further information can be obtained on application to Capt. MOYLE, the resident agent at the Mellanear Mine, who will show the property: and in London from the Liquidator, H. WILSON, Esq., Bartholomew House, Bartholomew-lane, E.C.; A. PULBROOK, Esq., solicitor, 28, Threadneedle-street, E.C.; and of Messrs. WILKINSON and HORNE, 7, Poultry, and 27, Bucklersbury, E.C., City.

FOR SALE, the STRANTON IRON and STEEL WORKS, situated at WEST HARTLEPOOL, in the county of DURHAM, now in FULL and PROFITABLE OPERATION. These well-known and

## VALUABLE FREEHOLD WORKS

adjoin the North-Eastern Railway at West Hartlepool, and the railway is laid down both within and without the works, is conveniently arranged, and both loading and unloading are cheaply effected. The works consist of a PUDDLING FORGE, with TWENTY FIVE FURNACES, all of which are well arranged, substantially constructed, and in working condition, are capable of producing 250 tons of puddled bar per week over the entire year. There are two shingling hammers, by well-known makers, capable of shingling the iron from 30 furnaces. The forge train consists of three pairs of rolls, adapted for rolling bars for plates, angles, or rails. The mills consist of a 20 in. plate, calculated to produce 140 to 180 tons of finished plates per week, with a great guillotine shears and other appliances, the workmanship throughout being very good, and the engines of especially first class workmanship. Also a rail mill, calculated to produce 150 to 200 tons of finished rail per week; and a small bar mill, with two furnaces, for the production of merchant iron, capable of making 100 to 120 tons of bar iron per week. The workshops and offices consist of a commodious foundry, fitting and lathe shops, stores, and offices, and a four-horse stable and outbuildings.

The liquidators of the Stranton Iron and Steel Company (Limited), are prepared to receive offers for the purchase of the above works.

For full particulars, and cards to view, apply to the liquidators, at their office, 116, Cannon-street, London, E.C.; to FREDERICK HERITAGE, Esq., solicitor, 28, Nicholas-lane, London, E.C.; or to the Manager of the Works, West Hartlepool, Durham. The plant, stock, and machinery on the works will be sold by valuation in the usual way.

## TO INVESTORS.

TWO SPLENDID OPPORTUNITIES SUCH AS ARE SELDOM MET WITH—the one, a COTTON SPINNING CONCERN, ready for IMMEDIATE WORKING, and stocked with the most VALUABLE MACHINERY, principally new—the other, a LARGE IRONMONGERY BUSINESS, at present and for the past 22 years in ACTIVE TRADE, and which has always realised very large profits—ARE NOW OFFERING.

Bona fide investors, speculating with the object of receiving promotion money, will not be treated with.

Those only who desire to secure a permanent income on a moderate investment, need apply personally, or address by letter—

MR. HALLAS, PUBLIC ACCOUNTANT, 32, FAULKNER STREET, MANCHESTER,

FOR 1873.

POST FREE, TWO SHILLINGS, IN STAMPS.

BAILEY'S

## ILLUSTRATED INVENTIONS,

(Sixteenth edition), 25th thousand, 1000 engravings, 150 pages, weight 10 ounces

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J. BAILEY AND CO.,  
INVENTORS, PATENTEES,  
BRASSFOUNDRERS,

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Engineers' & Contractors' Sundries,  
AND USEFUL INVENTIONS

For Cotton Spinners, Railway Companies, Engineers, Colliery Proprietors, and nearly every description of Employers of Labour, County Gentlemen, &amp;c., &amp;c.;

ALSO OF EVERY DESCRIPTION OF

ENGINE AND BOILER FITTINGS,  
PYROMETER INVENTORS AND PATENTEES;

## ELECTRIC TELEGRAPH ENGINEERS

AND

## TURRET CLOCK MAKERS;

Makers of the celebrated

## AUTOMATIC CLOCKS,

For indicating the pressure of steam day and night, rise and fall of the tide, &amp;c.

Winding Indicators, Signal Bells,  
&c., &c.

## DEPARTMENTS:

I.—BRASS FOUNDRY & STEAM FITTING DEPARTMENT.  
II.—ENGINEERS' SUNDRIES DEPARTMENT.  
III.—SMALL MACHINE, PUMP, AND FIRE ENGINE, &c., &c., DEPARTMENT.  
IV.—CLOCK DEPARTMENT.  
V.—ELECTRIC TELEGRAPH DEPARTMENT.  
All profusely illustrated, described, and priced.

J. BAILEY AND CO.,  
ALBION WORKS,  
SALFORD,  
MANCHESTER.

The above is sent free to Working Men's Clubs, Mechanics' institutions, or Improvement Societies.

## BAILEY'S SPECIALITIES FOR 1873.

## BOILER FEEDING

## THE GRINDROD

## BOILER FEEDER,

Which keeps the water at one definite height day and night.

MUCH IN USE IN THIS DISTRICT.

THE

## STILWELL WATER HEATER

AND

## LIME EXTRACTOR.

THE HALLAM  
GIFFARD INJECTOR.

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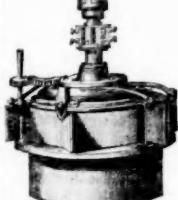
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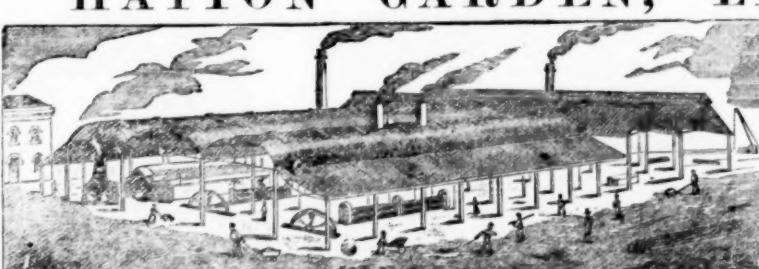
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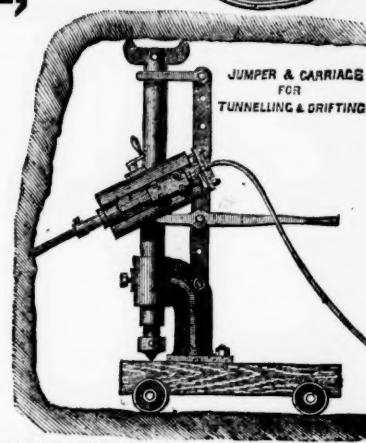
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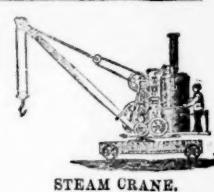
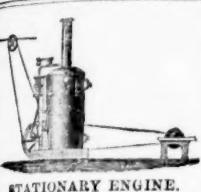
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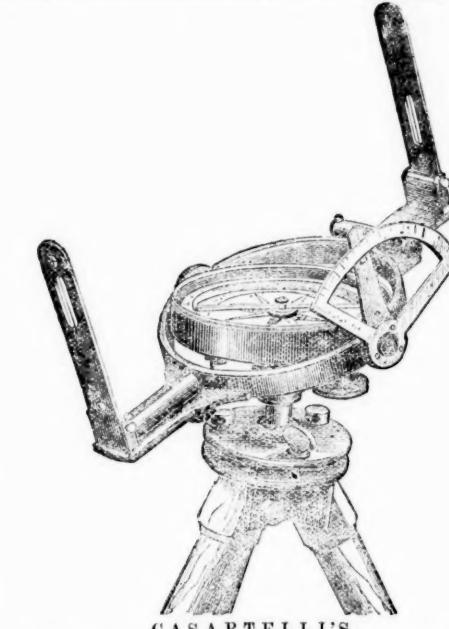
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30000 Blaen Caelan, s, Cardigan*	1 0 0	54	5 54	0 2 0...	0 2 0.	June 1873	0 0 6...	—	
5500 Blaen Caelan, s, Cardigan* (48 sh.)	3 10 0	34	34	0 10 9...	—	—	—	—	
15000 Boscastle Downs, t, c, St. Just*	3 0 0	21	2 24	0 5 6...	0 2 0.	Oct. 1873	0 0 6...	—	
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10240 Devon Gt. Consols, t, Tavistock**	0 12 0	24	24 24	116 10 0...	0 12 0.	May 1872	0 12 0...	—	
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15000 Van, t, Llanidloes*	4 5 0	40	32 2/4 37 1	11 2 0...	0 15 0.	Oct. 1873	12000 Excelsior, t, Stoke Clinsland	10 0 6...	—
30000 West Wheat Frances, t, Illogan	27 3 9	9	8 9	3 12 8...	0 5 0.	June 1873	12000 Florence and Tonkin United, t	10 0 0...	—
2458 West Wheat Frances, t, Illogan	5 2 8	25	20 22 24	638 10 0...	1 0 0.	Aug. 1872	15000 Florence, t, Cardigan*	3 0 0 0...	—
512 Wheat Bassett, t, Illogan	13 17 8	3	2 2 24	82 2 8...	0 10 0.	May 1873	4000 Fortescue, t, St. Austell*	1 0 0 0...	—
4255 Wheat Gwilt, t, St. Agnes	5 4 8	—	—	0 1 0...	0 1 0.	Jan. 1873	5000 Franco Consols, t, c	1 0 0 0...	—
5000 Wheat Margaret, t, Uny Lelant	13 17 8	3	2 2 24	82 2 8...	0 10 0.	May 1873	5000 Frank Mills, t, Christow	4 6 0...	—
10000 Wheat Mary, t, St. Dennis	5 0 0	45	4 4 4	0 1 0...	0 1 0.	Jan. 1873	8000 Fronyall, t, Mont. * [1000 sh. £s. pd.]	1 0 0 0...	—
1244 Wheat Mary Ann, t, Menheniot	10 0 0	—	2 2 24	74 5 6...	0 2 6.	June 1873	12000 Furze Hill, t, Taxis	1 0 0 0...	—
50000 Wheat Russell, t, St. Just	70 0 0	—	—	522 10 0...	0 4 0.	Aug. 1872	12000 Furze Hill, t, Taxis	1 0 0 0...	—
12000 Wheat Russell, t, Tavistock	1 0 0	—	—	0 2 0...	0 1 0.	June 1871	5000 Gem, t, Whitechurch	2 10 0...	—
13246 Wheat Seton, t, c, Camborne	73 0 0	25	25 22 24	256 5 8...	0 10 0.	Oct. 1873	12500 Gilfach, t, Llangadock	2 0 0 0...	—
10000 Wheat Tregoss, t, Roche	1 0 0	—	—	0 1 0...	0 1 0.	Jan. 1873	30000 Gladisir, t, c	1 0 0 0...	—
10000 Wheat Whistler, t, Warleggan*	1 0 0	—	—	0 1 6...	0 6 6.	May 1873	128 Gluinion Moon, t, St. Columb	3 0 0 0...	—
26000 Wicklow, t, t, t, Wicklow</td									